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FRONTISPIECE (PLATE XXVII)

CHRYSELEPHANTINE IMAGE OF GODDESS WITH MALE LOIN-CLOTHING:

THE PALACE OF MINOS

A COMPARATIVE ACCOUNT OF THE SUCCESSIVE STAGES OF THE EARLY CRETAN CIVILIZATION AS ILLUSTRATED BY THE DISCOVERIES

AT KNOSSOS

BY SIR ARTHUR EVANS

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HONORARY KEEPER AND PERPETUAL VISITOR OF THE ASHMOLEAN MUSEUM IN THE UNIVERSITY OF OXFORD: HON. FELLOW OF BRASENOSE COLLEGE

VOLUME IV: PART I

EMERGENCE OF OUTER WESTERN ENCEINTE, WITH NEW ILLUSTRATIONS, ARTISTIC AND RELIGIOUS, OF THE MIDDLE MINOAN PHASE: CHRYSELEPHANTINE 'LADY OF SPORTS', 'SNAKE ROOM' AND FULL STORY OF THE CULT: LATE MINOAN CERAMIC EVOLUTION AND 'PALACE STYLE'

WITH FIGURES 1–315 *IN THE TEXT, PLANS, AND COLOURED AND SUPPLEMENTARY PLATES*

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TO THE MEMORY
OF
FEDERICO HALBHERR
THE FIRST ARCHAEOLOGICAL EXPLORER
OF ANCIENT CRETE
AND DISCOVERER OF THE
GREAT INSCRIPTION OF GORTYNA
TRUE FRIEND AND HELPER
IN THE VERY BEGINNINGS OF MY OWN RESEARCHES
IN THE LAND OF MINOS
THE LAST VOLUME OF THIS WORK
IS GRATEFULLY AND AFFECTIONATELY
DEDICATED

THE EXCAVATOR AT THE NORTHERN ENTRANCE OF THE PALACE, KNOSSOS

From a photograph by Colonel Raymond ffennell.

PREFACE

I

JUST forty years from the beginning of my first exploration of the site of Knossos it has been given me to complete this final Volume of the 'Palace of Minos'.

The broad treatment necessary for the interpretation of the varied evidence has indeed entailed a survey extending far beyond the Aegean and even the Libyan Sea, and constant reference has been found necessary to contemporary and still earlier civilizations from the Nile Valley to the Euphrates. Such conditions, indeed, transcend the limits of individual capacity, and in the small measure in which it may have been possible to fulfil them the notes appended to these Volumes record my repeated acknowledgements to the work of fellow explorers in this wide area.

This broad survey and the explanatory materials thus included may give the successive Volumes of this Work—though always centring round the Great Palace—some title to be regarded as an Encyclopaedia of Minoan cultural features, of its Art, and of its Religion. The Index Volume to the whole work, kindly undertaken by my sister, Dr. Joan Evans, and already well advanced, will greatly help to make it generally serviceable.

In the endeavour to carry out this comprehensive task it has been my grave misfortune to have been deprived through a now lengthening space of years—owing to a mental affection that had left no avenue for hope—of the invaluable services of my friend and colleague Duncan Mackenzie. Called to my assistance at an early stage of the excavation, himself an M.A. of Edinburgh University, and at Vienna (where he graduated), a pupil of Benndorf, he had already given proof of his qualities as an excavator under the British School at Melos. What, however, no training could have produced was his original and gifted nature, his whole-hearted devotion to the work, and his subtle artistic perception. In a material way, indeed, I have still gained frequent help from the rough notes in his 'day-books', chronicling progress made on various lines together with neat sketches of half-exposed plans. But nothing could replace the friendly personal contact and availability for consultation on difficult points with one of such great special knowledge.

His Highland loyalty never failed, and the simple surroundings of his earlier years gave him an inner understanding of the native workmen and a fellow-feeling with them that was a real asset in the course of our spade-work. To them, though a master, he was ever a true comrade. The lively Cretan dances revived the 'reels' of his youth. No wedding ceremony, no baptism, no wake was complete among the villagers without the sanction of his presence, and as sponsor, godfather, or 'best man', his services were in continual request. There yet fall on my inner ear the tones of that 'still small voice' as he proposed the toast of a happy pair—with sly jocose allusions, fluently spoken in the Cretan dialect of modern Greek—but not without a trace of the soft Gaelic accent.

Even as these words return from the printers' hands there reaches me from Italy the brief announcement that, a few days earlier, on August the 25th that vexed Spirit had found release at last.

Apart from this sad stroke—all too long delayed!—the passage of the years itself has lately taken an untimely toll—even while the present Volume was in hand—of those whom I could most look to for encouragement and advice. Among them more than one of those who from the very beginning of the work had aided and given a heartening welcome to the results obtained have passed beyond mortal ken:

Zerstoben ist das freundliche Gedränge,
Verklungen, ach! der erste Widerklang.

Already, when this Volume was well advanced, A. H. Sayce was suddenly taken from us. It is hard to realize that that perennial source of fresh enthusiasm for research and the advancement of knowledge has ceased its up-springing. Much travelled scholar and first-hand student of the monuments of Egypt and the East (while never, still, forgetting his own Celtic and Iberic West), it had been owing to his interpretative genius that the first real light was thrown on the Hittite problem, and the revelations of Minoan Crete nearly concerned him. It is much to have enjoyed an affectionate relationship with him for so many years, and to have shared that quickening influence to the end. Here it may be recalled that in the last days of his life, with faculties undimmed and the eager intellectual curiosity of youth, he discussed with me the new evidence regarding the Mainland Minoan script.

With him, too, H. R. Hall, most learned and serviceable guide,

beyond the Aegean shores to Egypt and the Ancient East, has gone before his time. Gone, too, but in the fullness of his years, is Friedrich von Duhn, the revered German 'old master', whose broad sympathetic mind preserved to the last a fresh interest in the wider archaeological bearings of the discoveries at Knossos. More prematurely, again, has passed away from us, Salomon Reinach, who, out of his universal learning, first appraised their far-reaching significance, and whose stimulating interest and goodwill not even 'Glozel' could seriously interrupt. And, then—as the last Sections of this Work neared completion—the sad news reached me of the death of Lewis Farnell, most loyal of friends, whose great work on the *Cults of the Greek States* had done much to secure the recognition of the abiding influence of Minoan Religion.

The recent loss of Federico Halbherr, to whom the final Volume of this Work is dedicated, so intimately concerns the first beginnings of scientific research into the monuments of Ancient Crete and touches my own early efforts in that direction so nearly, that some fuller appreciation is due in this place. For he was the first in the field, the Patriarch of Cretan excavation. Already in 1884—a worthy reward of long epigraphic study—he had made his great discovery of the Inscription of the Laws of Gortyna. This was ten years earlier than the date when the urge towards exploring what lay behind the traditions of Minos and Daedalos, and of the fabled Labyrinth, together with the quest of a still earlier form of writing, had led me to Knossos. There it had materialized in the acquisition of proprietary rights on the site from its then Turkish owners (since transferred to the British School at Athens). During the critical times that followed, when Turkish obstruction blocked all work on the site itself, it was largely due to Halbherr's friendly help and advice and to his seasoned knowledge of local conditions that I was able, amidst difficulties and some dangers, to continue my explorations in quest of pre-Hellenic remains throughout the Centre and East of the Island, till finally—as the result [illegible]rrection, bringing with it the arrival of Prince George of Greece, and not a little through his kind offices—it was possible to begin the excavation.

Himself an Italian of Alpine stock, austere by nature and devout, Halbherr's apparently slight frame showed itself capable of singular endurance, and, though at times prostrated by fever, he pursued his extraordinarily successful researches under the roughest conditions of life and travel. His

simple, kindly manners won all hearts, and the memory of '*Κύριος Φριδερεῖκος*' still lives among the Cretan villagers. The 'net' in which he slept secure at night and his coal-black Arab steed that climbed the rocks 'like a wild goat', and on which to my knowledge he could gallop—over Turkish roads!—from Phaestos to Candia in little over five hours, have become almost legendary. His greatest satisfaction was to inspire others with his own zeal for active research and, above all things, both in Crete and in the University of Rome (which later claimed a large share of his activities) he was a master among disciples. He was the inspirer of the foundation of the Italian Mission in the Island (which in turn gave birth to the Italian School at Athens), that has done so much to recover our knowledge both of its classical and its remoter past. Halbherr himself had early recognized the importance of the Minoan element. This perception was quickened by the revelations on the site of Knossos, and it was owing to his archaeological flair that the great Palace of Phaestos, the Southern rival of Knossos, saw the light. I well remember, too, his invitation to examine the traces of Minoan antiquity on a 'promising site' near by. On a bank and terrace, below a little Byzantine Church, we picked up together, among rubble remains, fragments of vases and brilliant pieces of painted stucco—the earnest of an astonishingly rich harvest. For the dedication of the little Church was to the 'Hagia Triada'.

Halbherr, in later years, had suffered much from the wartime devastation of his old home and family holding in the North, which had been through all his active life his one haven of refuge and repose. There in the quiet Alpine valley he now rests, according to his desire.

Among those who happily are still active among us, Professor Luigi Pernier has worthily accomplished the work entrusted to him by his Master at Phaestos itself, and the Palace there will shortly receive the fullest illustration from its excavator. At Mallia, East of Knossos, where another Palace has since emerged,[1] Monsieur Fernand Chapouthier, Monsieur Jean Charbonneaux, and their colleagues of the French School of Athens have continued to produce remarkable results. Some of these will be seen to have a special bearing on subjects treated in the present Volume, and not least the inscribed tablets that have supplied a close parallel to the earlier

[1] The first excavations at Mallia and the discovery of the existence of a considerable Palace were due to Dr. Joseph Hatzidakis, the Veteran of Cretan excavation and creator of the Museum of Candia in its original form.

series of Knossos.[1] The extraordinarily beautiful relic in the form of a gold pendant, formed of two hornets, showing almost microscopic granulation, and going back in date to the very beginning of the Age of Palaces,[2] has itself opened a new chapter in the history of Minoan jewellery.

Coming to the neighbourhood of Knossos itself, the researches of Dr. Sp. Marinatos, the Cretan Ephor of Antiquities, at Amnisos, its more Easterly seaport, have made highly interesting contributions to our knowledge. His exploration of the Grotto of Eileithyia on the hillside above has revealed a cult continuous from Early Minoan to the latest Classical times and, walled round within its cavern shrines, the baetylic form of the Goddess still dimly visible through the gloom, in the shape of a white stalagmitic pillar, stands, as it had been formed, in the course of long geological Ages. In the sea-port itself Dr. Marinatos has now excavated a town-house with remains of frescoes, of which, thanks to his kindness, two restorations are here given,[3] with elegant groups of flowers in garden stands and hints of artificial basins, singularly illustrative of the refined artificial development of Minoan life. It is a foretaste of Versailles.

On the further shores of the East Mediterranean basin the epoch-making researches of Professor Schaefer and his colleagues of the French Mission in Syria have in the last few years brought to light, at Ras Shamra and its harbour site of Minet-el-Beida, vaulted tombs of princely aspect, containing Late Minoan vases, and reflecting not only in their general shape but in characteristic details the Royal Tomb of Isopata.[4] A little previous to this, in the immediate neighbourhood of Mycenae, Professor Persson and the Swedish Mission had explored another tomb, in this case of the bee-hive type containing the untouched relics of a King and Queen, vying in beauty and value with those of the Mycenae Shaft Graves. Through the kindness of Professor Wace I have also recently received his careful and detailed publication of the contents of Late Minoan cemeteries excavated by the British School under his direction at Mycenae itself.[5] As a welcome supplement, moreover, to all this fresh material, Dr. Karo's great work on the Shaft Graves themselves has also seen the light,[6] the fruit of long years of expert study, rudely interrupted but again renewed. Together with its

[1] See especially, F. Chapouthier, *Les Écritures Minoennes au Palais de Mallia* (Paris, 1930).

[2] See Pt. I, p. 75, Fig. 48.

[3] In a Supplementary Plate at end of Pt. II.

[4] See Pt. II, p. 771 seqq.

[5] Published in *Archaeologia*, lxxxii.

[6] G. Karo, *Die Schachtgräber von Mykenai* (Munich, 1930).

atlas, it has for the first time supplied a full and accurate account of Schliemann's discoveries.

Cordial thanks are due to him for the liberality that has placed me in possession of these magnificent volumes. But still less can I forget that, at a time when the Great War had already broken out, and national animosities were at their height, as a friend and fellow worker in the same field of research, he had found means to send me the first proofs of the text.

II

To the last the site has been fertile in surprises—the final touch being the chance finding of a royal signet-ring, leading to the discovery of the monumental Temple-Tomb of the last Priest-kings. This had been preceded by the emergence of a wholly new outer enceinte of the Palace itself, revealing what was originally the main entrance system from the West.

This additional area that thus called for intensive exploration has been the source of much new material, supplementing our knowledge of the earlier cultural stages of the Palace history. The two more 'koulouras' or circular walled pits here brought to light contained masses of painted pottery, a good deal of it representing novel types and covering the whole Middle Minoan Age. Below these, moreover, still earlier basements came to light antedating the construction of the Palace itself. Nearer the Palace wall, again—of later date, but supplying a singular illustration of the most primitive religion of the spot—was found a room entirely devoted to the tending of domestic snakes and containing the full furniture of their cult.[1] The shelter provided for these water-loving reptiles turned out to be an adaptation of a tubular section of one of the usual clay water-mains, while the 'snake tube' thus evolved became a recurring feature in Minoan shrines. It is shown to supply later the origin of a ritual object which was adapted to the use both of the Cyprian Lady of the Dove and of the Ashtoreth of Philistine Beth-Shan.

In the higher religious stratum to which the Minoan Goddess herself belongs as Lady of the Underworld—and bearing on the grimmer side of her worship in that Land of Earthquakes—an almost chance comparison with the markings on the native adder's back revealed the true source of her special symbol in that character. This sacred 'Adder Mark' appears

[1] See below, p. 138 seqq.

on the robes and altars of the Goddess, while on the painted borders of vases it survives to the end of the Minoan civilization. At Mycenae, which took it over, it composed the frieze—renewed from generation to generation—that encircled the hearth of the Royal Megaron. The full demonstration of its origin, hitherto undreamed of, is here given.

A fortunate conjunction of circumstances has further enabled me to illustrate and describe in this Volume a series of comparative examples, only lately come to light, of figurines of the Minoan Goddess herself. In one of them, executed in limestone and exceeding in stature any existing specimen, she appears as Snake Mother.[1] A chryselephantine statuette, since acquired by the Toronto Museum, in a dress consisting of gold plating, half masculine in cut, exhibits her in the very interesting character of 'Lady of the Sports'.[2] To these is added a new ivory figurine of her boy consort with gold loin-clothing, and perhaps originally a biretta on his shorn crown—a little masterpiece of sculpture, unrivalled of its kind either in Egyptian or Mesopotamian Art.[3]

The illustration here evidently afforded of the ritual tonsure of 'childhood's' locks by one preparing to enter on manhood's estate is of great interest as supplying the explanation of certain affixes found at both Knossos and Mycenae in the shape of plaited locks.[4] Highly suggestive, too, in this connexion are the comparisons, here invoked,[5] with the records of hair offerings in the Carian Temple of Zeus Panamaros—himself a double of Zeus Labrandeus, God of the Double Axe.

Such detailed evidence as to a Minoan place of Cult as was never before obtained has been gained by the discovery South of the Palace, and in close connexion with the Temple Tomb referred to below, of what there is every reason to suppose was a high-priest's house containing his private chapel. The Western section of this is very fully preserved. It was entered between columnar balustrades, with an inner shrine where stood the incurved altar-blocks, flanked by pyramidal Double Axe stands, and in front, the drain for sacrificial blood.[6]

Sculptured slabs with remains of spiraliform reliefs and of a triglyph frieze with half-rosettes were brought out by the recent explorations on the West side of the Palace. These remains, of which such near counterparts

[1] See p. 159, and Fig. 150.
[2] See Frontispiece to Pt. I and p. 28 seqq.
[3] See Pt. II, p. 470 seqq., and Fig. 394, &c.
[4] Pt. II, pp. 481, 482, and Figs. 404, 405.
[5] *Ib.*, pp. 478, 479.
[6] Pt. I, p. 205 seqq, and Fig. 157.

are to be found in some of the stelae of the Mycenae Shaft Graves and the façade of the 'Atreus' Tomb, have called for a short re-statement of the overwhelming evidence as to the direct relationship of the earliest monuments on that site to the M. M. III phase of Cretan Art.[1] Here it need only be remarked that the strange theory still seems to be upheld in certain quarters, which not only divorces the history of the Shaft Graves from that of the Tholos Tombs, but actually refers the finest example of the latter, the so-called 'Treasury of Atreus' (in spite of the M. M. III relics found within it), to the last age of decadence! It is of a piece with the terminology —still in vogue among those who approach the Minoan world backwards, from the Mainland side—which describes the products of that unified culture, when found North of the Aegean, as 'Late Helladic'.[2] With equal accuracy we may speak of the works of Hellenic Art in Magna Graecia as 'Late Italic' or 'Late Sikel'. The Triumphal Arch of Orange is thus claimed as 'Late Gaulish', and the Roman Wall itself becomes 'Late British' with equal reason!

The concluding Sections of the first Part of this Volume are devoted to a general review of the successive classes of Late Minoan pottery, with special reference to the remains on the Palace site itself. Outstanding in this regard are the evidences here produced of the evolution from the L. M. I *b* style—itself so widely represented—of a 'Palace Style' that must be regarded as the creation of the last Priest-kings. A well-nigh complete series of examples of this grand ceramic class has here for the first time received full illustration. Among the permanent records of its outgrowth from various elements of L. M. I *b* series, special attention is called to a decorative ingredient in the designs, resembling three C's, derived by gradual stages from a triple group of rocks and sea-tang belonging to the marine motives of the preceding style.[3] These 'three C's', as here shown, themselves survive on vases of the succeeding L. M. III *a* ceramic stage both in Mainland Greece and as far afield as Cyprus. Not less suggestive is the continued imitation down to the latest Minoan phase of a special architectonic motive—based on a Pillar Shrine—of which a fine

[1] See Pt. I, § 97.

[2] What makes this description still more unscientific is the undoubted fact that most of the un-Minoan remains of the 'Mycenaean' Age found in Mainland Greece do not belong to the older stock to which the name 'Helladic' is properly applied. They are rather of intrusive, 'Minyan' origin.

[3] See p. 314 seqq., and Fig. 250.

example occurred on a 'Palace Style' amphora.[1] The L. M. II ware, indeed, in its humbler aspects, is shown to form the real base of the 'diffused Mycenaean' class of the succeeding Age, finding in this a suggestive parallel in the dissemination overseas of the later script (B) at a time when the Palace itself was largely a heap of ruins.

Of exceptional religious interest is the 'Camp-Stool Fresco', for the first time fully described, with a coloured restoration, in the first Section (§ 100) of the Second part of this Volume, though the figure known as 'La Parisienne', belonging to the series, with her large eyes and cherry lips, had already attracted much notice. This wall-painting had decorated what seems to have been a Sanctuary Hall in the North-West Palace quarter, and the long-robed seated figures—some of them evidently children—may well have belonged to a sacral college. The high-stemmed chalices that they pass to one another like 'loving cups' themselves suggest a service of Communion. Similar long robes are already seen in the 'Palanquin Fresco',[2] and the sacerdotal character apparent in that case fits in with a series of gaberdined male figures that appear on seal-stones, some of which we may recognize as actual Priest-kings. A personage of this kind on a Vapheio gem is seen in his war chariot.

These long robes are themselves symptomatic of a growing Syrian influence, which, in the latter case, makes itself evident in the single-bladed axe of Syro-Egyptian type[3] held in the warrior's hand. This influence is here further illustrated by a series of cylinder seals in an imitative Minoan style, becoming more frequent in the closing epoch of the Palace, of which it has been possible to reproduce specimens from the neighbourhood of Knossos and its harbour town. The actual import of Oriental cylinders, dating back to the age of Hammurabi, has here received further illustration, but the most remarkable example of all such objects—derived from an early stratum of the 'Initiatory Area'—is the large gold-mounted cylinder of lapis-lazuli, here for the first time reproduced,[4] exhibiting traditional elements that derive rather from the days of Sargon of Akkad.

Thanks largely to the evidence supplied by Minoan engraved gems, it has been possible here, moreover, to put together a good deal of fresh and often illuminating evidence regarding those special creations of Minoan

[1] See p. 347 seqq., and Figs. 291–3.
[2] See Pt. II, p. 398, Fig. 332.
[3] *Ib.*, p. 413 seqq., and Figs. 336, 343*a*, *b*, *c*, &c.
[4] Pt. II, p. 423 seqq., Figs. 349, 350.

religious art, the beneficent lion-headed Genii.[1] Their affiliation to the Hippopotamus Goddess, Ta-urt, is here fully established, the parallelism extending even to her astral relations. The seal-stones on which she appears as a waterer of plants are further shown to fit on to an earlier series of a simple talismanic usage, in which the ritual vessels alone appear beside sprays of vegetation. The latter were, in fact, rain-bringing charms. On the great gold signet-ring from Tiryns the Genii bear libations to the seated Goddess; elsewhere they attend the young male divinity.

For our enlightenment not only as to Minoan Art and Religion, but as to the most varied aspects of life, the seal-stones, together with the signet-rings, are of the first importance. In this department, as the result of specimens collected over a space of forty years, and especially to acquisitions made under the favourable circumstances attending his earlier researches in Central and Eastern Crete, the Author has been enabled for the first time to arrange the material on a chronological basis. Much relating to the more primitive classes has already appeared in the earlier part of the present Work,[2] and the clay seal impressions found in the 'Temple Repositories', as well as the closely allied hoards from Zakro and Hagia Triada, have called, above, for comparisons with the contemporary works of greater Art.[3] In the Second part of the present Volume it has now been possible to put together a fully classified type series covering the whole period from the closing phase of M. M. III to the last Palatial epoch and supplemented by the late hoards of seal impressions found in the Palace.[4]

Complete in themselves, these little intaglio types often serve as an epitome of more fully elaborated works of the greater Art, whether in relief or painting, of which too often, only fragmentary remains have been preserved. They open glimpses to us of whole ranges of such Minoan designs, of which all traces have now vanished, while suggesting at the same time many novel versions of subjects already known to us. In the case, indeed, of the engravings on signet-rings, or the special class of large gold beads illustrated by the Thisbê triplet,[5] we recover essential details of entire pictorial scenes. The translation back of the designs on the 'Ring of Nestor' into a 'Minature Fresco' panel might well be followed by the

[1] Pt. II, § 103.

[2] See vol. i, p. 123 seqq., and § 13, p. 271 seqq. Compare to *Scripta Minoa*, i, *passim*, in relation to the Hieroglyphic Script.

[3] Vol. i, § 31, p. 669 seqq.

[4] Pt. II, §§ 105–7 (pp. 484–590).

[5] See p. 513 seqq., and Figs. 457 *a*, *b*, 458, and 459.

enlarged reproduction in colours on similar lines of the threefold subject—equally minute in its varied details—of the 'Ring of Minos', which led to the discovery of the Temple Tomb.[1]

Many of the ordinary seal-types themselves also suggest the same dependence on original designs, perhaps at the time enjoying a wide vogue, in which the subject was completely developed. A series of intaglio types, depicting episodes of the circus sports and other bull-grappling scenes, have been already shown to stand in this relationship, and a remarkable instance is here supplied of a gem presenting an excerpt from a composition closely akin to that displaying the lion-hunt engrailed in coloured metal-work on the Mycenae dagger-blade.[2]

Within these narrow fields, the gem engravers, with selective felicity, continually reflect the skill of artists working on a larger scale. A good example of this is given by the instantaneous sketch, on a lentoid from Mirabello,[3] of a group of water-birds, one asleep, one plunging its head into the water for food, and the other opening its wings for flight. An actual illustration of ancient fable may be recognized in the delightful sketch, on a flat cylinder from Arkhanes—an important Minoan settlement inland from Knossos—of a wild-goat perched on a rock just out of reach, mocking the dog who had pursued him across the level. Another finely engraved blue chalcedony gem of the same class, found on a knoll North of the Palace site, bears a design of two tumblers [4]—in Minoan men's attire, but with Libyan plumes—symmetrically grouped in attitudes which link them to early Nilotic prototypes. *Per contra*—thanks to the chronological sequence that it has been possible to establish from these full materials—it can be shown that the type of the lion leaping on his prey—so much affected by early Greek Art and often regarded as the very symbol of the East—represents the Minoan version,[5] clearly distinguishable from the Oriental scheme (also not unknown in Crete), where the lion's hind-legs rest on the ground—itself of old Sumerian tradition.

The naturalistic spirit of the Minoan animal forms is no new theme in this Work. This is strongest in the great Transitional Age M. M. III–L. M. I *a*, some intaglios of which are here included, such as the remarkable

[1] See Pt. II, § 117 : Epilogue.

[2] See *Ib.*, p. 575 and cf. vol. iii, p. 118 seqq., and Fig. 71.

[3] *Ib.*, p. 492.

[4] Pt. II, p. 500 seqq., Fig. 443, and cf. Figs. 444–9.

[5] *Ib.*, p. 527 seqq.

seal impression depicting a flying dove,[1] the perspective rendering of the parrot wrasse,[2] or the flying-fish that might have been taken from the Phylakopi fresco. One of the most strange examples is the calf's head as dressed for the table.[3] A long Cretan pedigree may be traced for many of the types here collected, going back in cases, as in the trophies of the chase slung on poles, to Early Minoan models. Among such motives is the wounded quarry, which later takes the sensational form of the animal vainly endeavouring to extract the lethal shaft, so finely exemplified by the gold bead-seal from the Third Shaft Grave at Mycenae. On a gem here illustrated it is applied to a painfully realistic figure of a calf.[4] Finally, as in the case of a seated lion, the attitude of the wounded animal is preserved, but the shaft omitted. Special attention is also called to a series of designs, such as the cow licking her calf or her own hind foot, scratching her nose or biting at a fly on her flank—in their character pure *genre*—which are literally copied as Greek coin-types.[5]

A group of deposits, here described,[6] of clay seal impressions found in association with the latest remains of the Palace has now supplied a secure chronological basis (L. M. II) for a whole series of intaglio types—just as those from the Temple Repositories and allied sources had made it possible to assign an earlier series to the closing M. M. III phase. One recurring feature of the later class is the greater adaptation of the design to the face of the stone—at times at the expense of a certain contortion of the animal figures—and the frequent occurrence of outgrowths of the 'antithetic' scheme, such as single-headed monsters, crossed and double-bodied. As a cultural symptom there is a marked prominence of bucolic motives, among them a boy milking a cow, another leading the animal, and a part of what really looks like a spectator leaning over a fence to survey a prize ox.[7] Among the impressions of gold signets from these hoards the types of the lion-guarded Goddess, and the indications of a free-standing sculptural group of the lions with their fore-feet on a pyramidal cairn, are of special religious interest.[8]

[1] Pt. II., p. 490, Fig. 424; from H. Triada. Cf. D. Levi, *Le Cretule di Hagia Triada, &c.*, p. 27, Fig 52.

[2] *Ib.*, p. 494, Fig. 430.

[3] *Ib.*, p. 491, Fig. 425.

[4] See p. 543, Fig. 498 and cf. Fig. 499.

[5] *Ib.*, pp. 558, 559, Figs. 520, 521, and pp. 560–2, Figs. 523–6, and 528.

[6] For the catalogue, see p. 601 seqq., and for select illustrations, see pp. 608, 609, Fig. 597 A, B.

[7] See p. 564, Figs. 532–4.

[8] See p. 608 seqq.

These hoards of clay sealings—sometimes also signed and countersigned—themselves stand in relation to a series of deposits of clay tablets inscribed with the linear Script of Class B. The discovery of these documents attesting the existence of an advanced system of writing in Minoan Crete—which in its earlier phase had preceded the Greek by some seven centuries—at the time excited more general interest than any other found within the Palace walls of Knossos.

But the widespread hopes of its early interpretation were not verified. No one, indeed, who understood the real conditions could expect such a speedy solution of the problem. According to every indication—such as that supplied by the local and personal names of pre-Hellenic Crete, and even the appreciable verbal survival in Greek itself—the root affinities of the original language lay on the Anatolian side. The phonetic value of the signs themselves was itself unknown, and though some light on them might be obtained from the early Cypriote syllabary, even this, as pointed out in this Volume, only exists in a limited degree. The conditions, indeed, are by no means so favourable as in the Etruscan inscriptions, where we have to deal with a known alphabet, yet in that case—after over three generations of research—how vain on the whole has been the effort at decipherment! Of the Minoan script, not only the language but the greater part of the phonetic values of its characters are both lost.

It is true that when a great earthquake of Nero's time seems actually to have laid bare a deposit of these tablets on the site of Knossos all difficulties concerning the unknown script were quickly disposed of. The versatile tyrant at once pronounced it to be Phoenician, and, further observing that the documents concerned the Trojan War, ordered his learned doctors to translate them into Greek. Placed between the devil and the deep sea, the doctors produced the work of Diktys of Knossos, the companion of Idomeneus, described by Lydgate in the first English version as the 'Auncient historie and trewe and syncere Chronicle of the Warres of the Grecians and the Trojans'.

Unfortunately no such complete and satisfying result can be here offered. All that I have been able here to attempt—after copying over 1,600 documents of which the whole or some material part had survived, and as the outcome of prolonged researches into their details and as to the various applications of the signs themselves—is at most of a preliminary nature. In this place, naturally, it is impossible to give more than a summary review

with selective illustrations. It has been possible to prepare a fairly complete signary, including the comparative examples from Class A, that preceded and partly overlapped the present, and of which a short retrospect has been supplied. In the actual method of writing we are struck by a clarity and adaptability in strong contrast to that of the early Greeks. Instead of running into one another the sign-groups are espaced and sentences punctuated. The 'type', so far from showing a dull sameness, varies in regard to the importance of the groups as much as three, or even four, times on a single tablet. The tablets themselves have been classified according to their contents, as to which a clue has in many cases been supplied by the pictorial adjuncts to the inscriptions, and at times through the ideographic information afforded by certain characters. From this evidence it appears that the documents in an overwhelming degree refer to accounts and lists of persons and possessions. The numeration itself, practically identical with Class A, is clearly decipherable, and an interesting group of tablets refers to percentages.

We have here real contemporary records of the economic history of the later Palace. The tablets where ingots and the balance sign are depicted supplement our knowledge of the methods of payment and of the mediums of currency supplied by the discovery of the standard talent weight and numerous smaller weights in the form of disks engraved with numbers. The inscriptions prefixed to illustrations of metal vases, including the 'Vapheio' type and bulls' head 'rhytons', throw a light on the contents of the Treasury attached to the Central Sanctuary. The various cereal representations and the 'Granary' tablets refer to stores both within and outside the building. The cultivation of the soil is further illustrated by documents referring to olive-groves and saffron gardens, and large classes relate to flocks and herds—horned sheep, swine, oxen, and horses.

A group depicting the wild goat's horns used in connexion with the manufacture of bows, may have been mainly connected with hunters' needs, but the military side of the last Minoan dynasty at Knossos is well to the fore. In addition to the 'sword-tablets', the large class presenting chariots or their parts may be thought to bear a more warlike character. This, indeed, is clearly marked by the cuirasses with which many of them are associated, at times erased and superseded by the 'ingot' or talent-sign, the equivalent of a 'knight's' fee. The frequent occurrence of the 'throne

and sceptre' sign on the inscriptions on the 'Chariot Tablets' is not without significance.

Of considerable interest, too, are the many documents—some of them of exceptional dimensions—containing lists marked by the ideographic determination of men or women, while a smaller number relate to children of both sexes. The 'name groups' which they contain are in some cases common to the earlier linear Class A, and certain pictographic characters that appear in these suggest wider connexions. An exceptionally large tablet, on which the 'man' sign is repeated, contains twenty-four lines, enumerating three lists of persons. The sign-groups on specimens of this class, coupled with the 'man' or 'woman' sign obviously represent the names of persons of the two sexes, and it is therefore of special interest to find at times a quasi-pictorial figure, such as a goat, among their component elements. This recalls the typical *Tarku*-names of Hittite Asia Minor.[1]

The business character of the great bulk of the inscriptions is clear. What is surprising is the meticulous methods visible both in the documents themselves and in the signing and countersigning of the clay sealings that had secured them. Even the edges of the tablets are at times docketed and numbered. The distinctive formulas that marked special deposits actually served in the local Tribunal to convict a workman who had purloined specimens from a special Magazine. The bureaucratic regulation here visible is certainly in keeping with the household of Minos in his traditional character of the great law-giver.

Nor did the elaborate system of written records of which we have here the proof cease even with the final overthrow of the Great Palace. Thanks to the remarkable discoveries of Professor Keramopoullos in the Boeotian Thebes, and to the special kindness of the Greek Archaeological authorities, I am able to supply in the Second Part of this Volume a detailed demonstration that a series of inscriptions on vases from a cellar of the later 'House of Kadmos' actually perpetuated on Mainland soil through the succeeding epoch, with only a few local additions, the later script of the Palace of Knossos[2]—one might almost say, its 'Court-hand'. More imperfect finds of inscribed pottery at Tiryns and Mycenae also fall into their place as part of this same remarkable survival, the implications

[1] Pt. II, p. 713.

[2] Table showing the Mainland Signs compared with Class B at Knossos is given, *Ib.*, p. 745, Fig. 728. Out of 45 comparative forms only two or three can be regarded as uncertain.

of which as regards many current theories must be regarded as nothing short of revolutionary. Amongst other features may be mentioned the occurrence of the same name-groups.[1] It was the same language and the same race.

Of the spread of the earlier, as well as the later, Script of Knossos, accompanied by other Late Minoan elements, in lands East of it, already exemplified by the case of Cyprus, fresh evidence is here adduced. An inscription, with characters of Class A, on a votive figurine of a ram from Amisos, Eski Samsoun on the Pontic coast, fits in with occurrence on the same site of Royal Hittite painted pottery presenting decorative motives by a contemporary Minoan hand.[2] The remarkable vaulted tombs containing Late Minoan relics discovered by Professor Schaefer at Ras Shamra on the North Syrian Coast are here shown to illustrate hitherto unique details in the structure of the Royal Tomb of Isopata[3] and its fellows, and this phenomenon is supplemented by occurrence on a votive silver bowl of a graffito inscription of the Linear Class B.[4]

In the Second Part of this Volume is also given a general account of the concluding stage of the Palace at Knossos, to which the documents of the advanced Script B belong.[5] As seems to be implied by its collateral relation to Class A, which it overlaps elsewhere, it is there regarded as marking the entry on the scene of another dynasty. The new bureaucratic centralization of which the tablets themselves give evidence is a natural accompaniment of a more despotic rule. The Athenian traditions of Minos, the tyrant and destroyer, may be thought to receive support from the devastation which at this time interrupts the course of other Cretan communities. The military parade of the 'Shield Fresco', made to adorn the successive flights and galleries of the Grand Staircase about the beginning of this Era, is itself undeniable, and the flourishing state of the Armoury is attested not only by the 'sword-tablets', but by the repeated hoards of documents showing what can only be regarded as war chariots and their equipments. But this aggressive spirit, if so we may interpret it, was marked by real signs of an artistic revival on conventional lines. The Room of the Throne—forming part of a group of wholly new structures—with its finely carved seat of honour and the decorative friezes round with confronted Griffins, finds here

[1] See Comparative Table, Fig. 734, p. 751.

[2] See pp. 765–7 and accompanying illustrations.

[3] See pp. 771–6.

[4] Reproduced on p. 783.

[5] §§ 115 and 116.

its first adequate description [1] and coloured reproductions. On the side of the Domestic Quarter it is also now shown to form part of a similar fine scheme of redecoration illustrated by the 'Argonaut frieze', of which a section has been now recovered.[2]

The end was sudden, and the evidence once more points to an earthquake as the cause, followed by a widespread conflagration and, doubtless, ensuing pillage of the ruins left. But on this occasion the catastrophe was final. Squatters, indeed, after a short interval of years, occupied the probably considerable shelter still offered by the remains of the fabric. But the Minoan augurs may have at last satisfied themselves that the Powers of the Underworld were not to be exorcized. The long experiment was given up, and there are some reasons for supposing that the residence of the Priest-kings of Knossos was, perhaps not for the first time, transferred to a Mainland site, quite probably, indeed, to Mycenae, at this time re-decorated according to the latest Knossian fashion.

That the overthrow did not seriously interrupt the course of culture at Knossos itself is indicated by the contents of tombs in neighbouring cemeteries. An epilogue now supplied by the dramatic finding of the royal signet-ring that led in turn to the discovery of the Temple-Tomb [3] has confirmed the general continuity of local tradition. Not only did there come to light within its inner vault a late interment of what may have been an actual scion of the royal House, but at the entrance of the tomb and on the terrace above had been placed a series of offertory vessels dating from the immediately ensuing Age—L. M. III *a*—and witnessing the survival of a memorial cult.

III

It remains once more to express my warm acknowledgements to many fellow workers for valued assistance afforded to my work. In particular, as regards the excavation of the outer enceinte of the Palace on the West only recently brought to light, of the 'High Priest's House' and Temple-Tomb, and of the relics found in all these I have been much indebted to the late Archaeological Curator of Knossos and to Mrs. John Pendlebury.

[1] See § 116, with coloured Plate of the Griffin, and the Frontispiece of Part II.

[2] See § 116.

[3] *Ib.*

In executing the plans of the newly unearthed structures Mr. Piet de Jong, the Architect of the British School at Athens, has supplied further examples of his fine work, not least the remarkable isometric drawing of the 'Temple-Tomb' in the pocket of the concluding Part of this Volume. Monsieur E. Gilliéron, fils, has also added much to the already existing Gallery of his works in this publication—including the coloured views of the Room of the Throne as restored, and the Griffin Fresco, as well as his skilful reconstitution of a section of the 'Argonaut' frieze. My thanks, too, are again due to Mr. E. J. Forsdyke, Keeper of the Classical Department in the British Museum, for looking over the proofs of this Volume, as well as for his ready help in matters concerning the Collections in his charge.

Throughout the whole of these Volumes—literally from *alpha* to *omega*—I have been exceptionally indebted to the services of the Oxford University Press. The inherent complexity of the subject, and the insertions and dislocations frequently needed to keep pace with the progress of discovery, have combined to beset this publication with difficulties hardly before experienced in a like degree. Not the least of these has been due to the constant effort to fit the figures—between two and three thousand in number—as far as possible into their appropriate place in the text, of which, in a work of this nature, they can only be regarded as an integral part. In all this my warmest acknowledgements are due to the Printer of the University Press and his Secretary, Mr. Philip Bennett—with whom I have constantly had direct personal relations—to the Readers and the heads of the Departments connected with the setting up of the type and the preparation of illustrative materials, not only for the patience and courtesy shown in spite of demands of an exacting nature, but for useful help freely given.

In one respect, indeed, the concluding Volume of this Work presents a typographic achievement of a novel character, but worthy of the oldest traditions of the Oxford Press. Thanks to the expert skill of the late Controller, Mr. Horace Hart, the Minoan Script has for the first time secured a fount of its own, and it has been possible here to print extracts from this most ancient of all European forms of writing in type, both of the 'Two-line Pica' body and of the 'Great Primer'.

IV

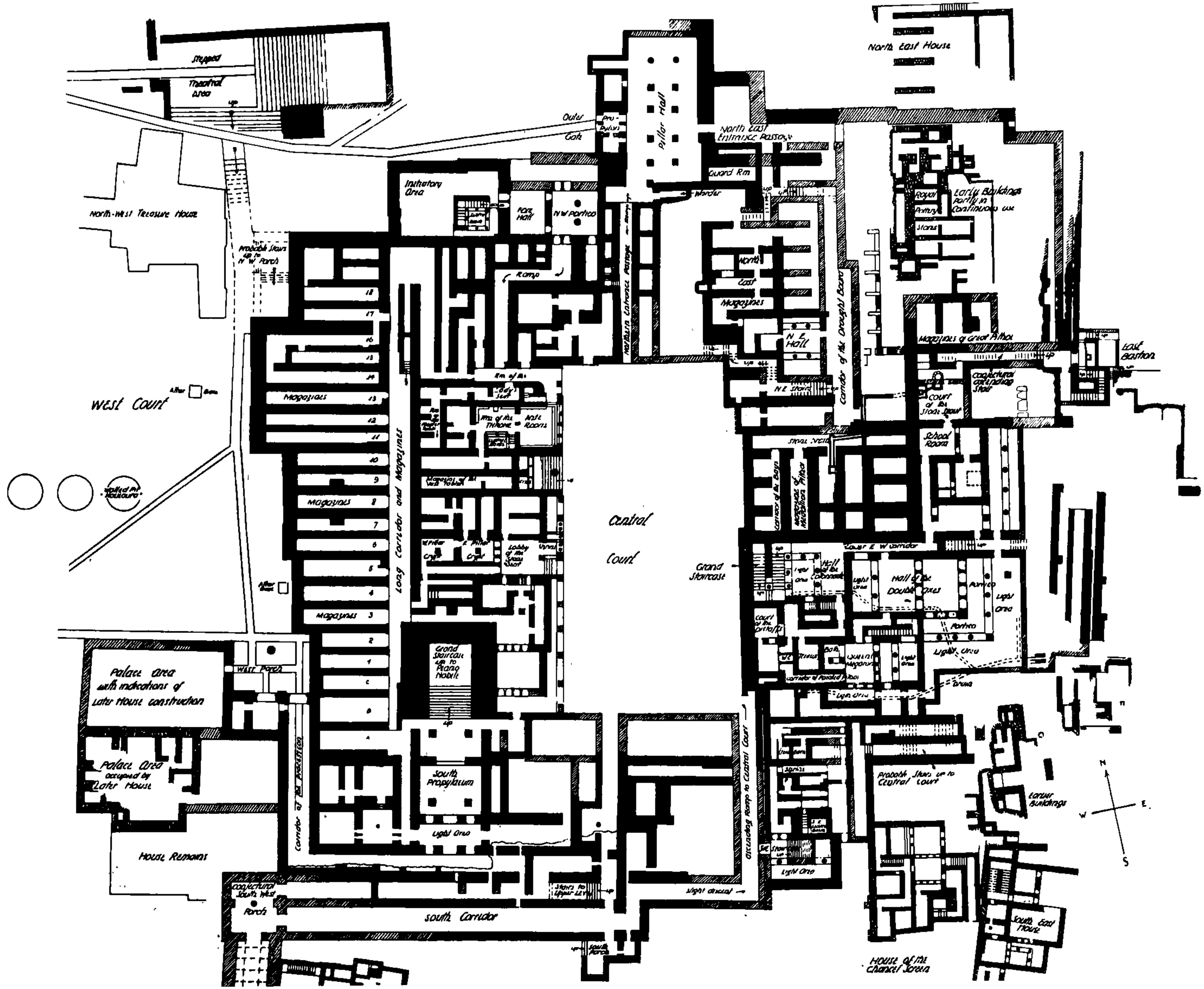
AIR-VIEW OF THE PALACE SITE

One great *desideratum* of this Work had long remained unsatisfied. Only quite lately Mr. E. G. Lumsden, then in the service of the Imperial Airways, succeeded in obtaining a successful snapshot of the site, which he has very kindly placed at my disposal. The air-view taken is here reproduced with the existing ground-plan placed opposite for comparison, and displays the whole of the Palace site, with the exception of a small piece of the much-ruined South-West angle. It includes the newly discovered enceinte on the West, with its circular-built pits, or 'koulouras', with the steps of the Reception area (formerly called the 'Theatral Area') beyond, and the starting-point of the paved *Via Sacra*, pointing to the 'Little Palace'.

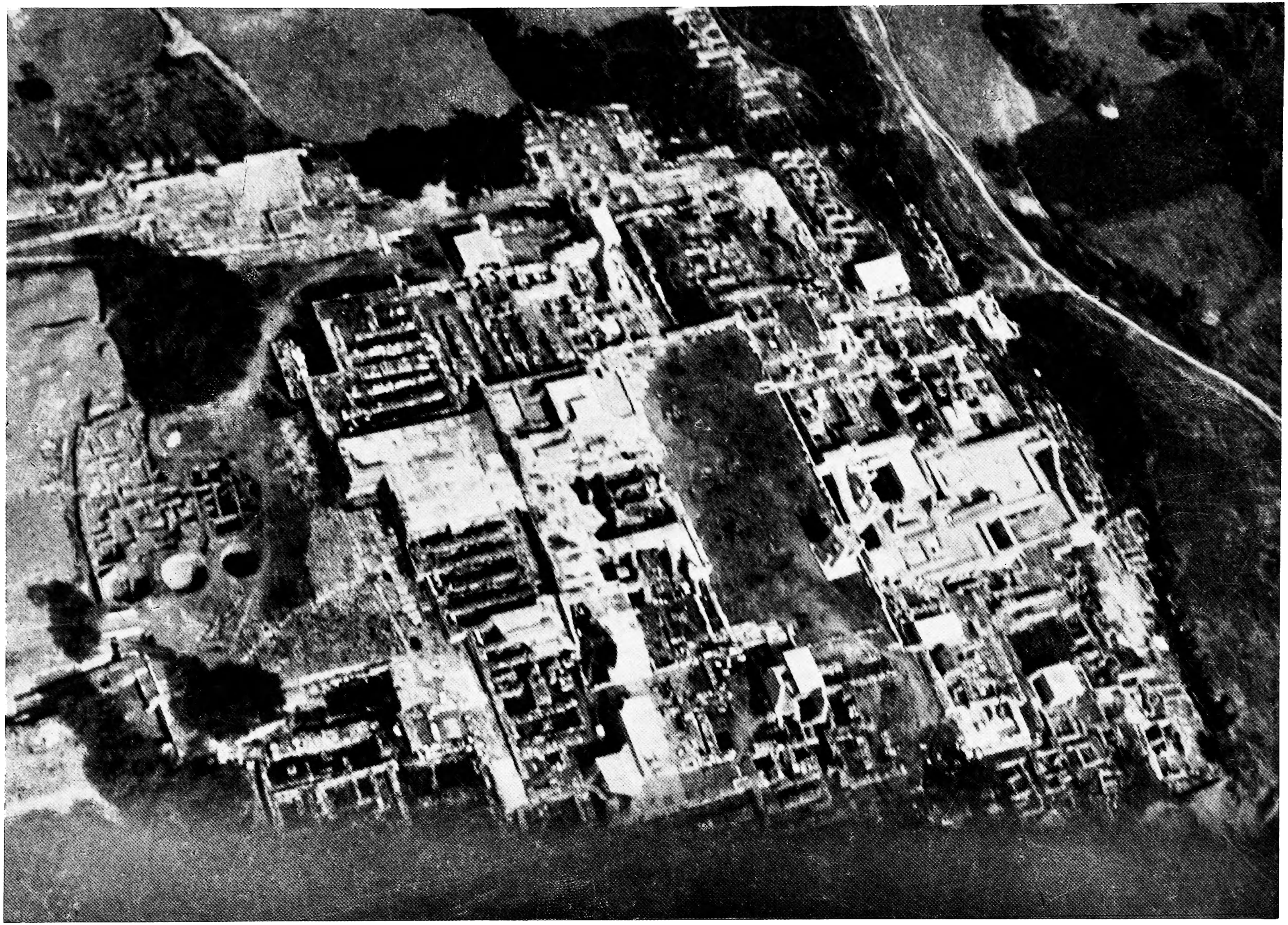
A mule path is visible leading North from the old Turkish house (not included), which had been the earliest head-quarters of the Excavation, towards the hamlet of Makryteichos, the name of which refers to the 'Long Wall' of Roman Knossos.

Had the Fates, indeed, allowed Daedalos, the legendary builder and adorner of the House of Minos, and Father of Aviation, to take part in this later flight, there are many features that he would have sought in vain. Gone are the long porticoes and superimposed verandahs,[1] the terraces and roof gardens, and below, perhaps, to the East, approached through the postern of the great Bastion (on the river-flat, now overgrown with secular olive-trees), other monuments of which all record has vanished—the crowded Arena of the bull-sports, and beside it, may be, the 'Dancing Ground of Ariadnê'. But the old ground-plan of the Palace still stands four square, partially roofed over in places, as first conceived by its great architect, with its Central Court clearly defined and the main entrances to it from North and South easily discernible. (Compare Ground-plan.) The light-wells of the Grand Staircase and of the adjoining Hall of the Colonnades show clear openings amidst the repaved upper floors on that side, and the light court of the great reception room below—the 'Hall of the

[1] For a restored drawing of a Section of the West Palace Wing facing the Central Court, by Mr. F. G. Newton, which gives the best idea of a complete portion of the building, see vol. ii, Pt. II, Fig. 532 (folding Plate opposite p. 814).



BASEMENT PLAN OF PALACE (ORIENTED FOR COMPARISON WITH AIR VIEW) THE NEWLY DISCOVERED WESTERN ENTRANCE SYSTEM AND ENCEINTE IS NOT HERE INCLUDED.



THE PALACE SITE AT KNOSSOS FROM THE AIR, LOOKING NORTH, AND INCLUDING THE NEW 'KOULOURAS', ENTRANCE SYSTEM AND ENCEINTE WALL ON THE WEST AND THE 'ROYAL VILLA' ON THE NORTH-EAST. THE WEST SECTION OF THE SOUTHERN TERRACE IS OBSCURED. FROM A PHOTOGRAPH TAKEN FROM A HYDRO-PLANE OF 'IMPERIAL AIRWAYS' BY MR. E. G. LUMSDEN. (COMPARE GROUND-PLAN IN TEXT. IN THE PHOTOGRAPHIC VIEW PARTS OF RESTORED UPPER FLOORS IN PLACES COVER THE BASEMENT STRUCTURES.)

Double Axes'—still surrounds its Eastern end. Enough is still here preserved to awaken memories of the great ruler, law-giver, and 'priest for ever after the Order of Melchizedek', in obedience to whose behest his craftsman had raised the Palace-Sanctuary.

It can be claimed for this vast structure, of which we have here a novel glimpse, that, ruined as it is, it has supplied quite exceptional information as to its original disposition. The frescoes still connected with many of the walls give a distinctive character to certain parts, while, not to speak of the store-jars still ranged in the Magazines, the masses of objects brought out in the various rooms often throw a light on the uses that they had served. Almost every department of Art is splendidly illustrated, and the 'Sculptor's Workshop' shows the artist interrupted at work. In connexion with one Hall we see depicted a religious ritual in the nature of a Communion, while in the 'Room of the Throne' we seem actually to have intruded on a Consistory presided over by the Priest-king. The clay archives in the highly advanced Linear Script give an insight into the everyday business transactions. Altogether we are enabled here to reconstruct a picture of the daily life of the inmates such as is not even approached by any other great building of Antiquity.

Nor, it may be thought, can any other site quite compare with the vast range of underlying levels, marking successive occupation, here so clearly delimited by catastrophic strokes due to no human agency. Of these seismic strata—that thus supply a chronological basis—the Minoan series go back through six different phases of Palatial history, while others still relate to stages of comparatively civilized life. Below these again—for the depth of some seven additional metres to the virgin rock—lies layer after layer of primitive Neolithic settlements. Thus had the 'Tell' of Kephala itself been built up, that was later to be partly rased for the Central Palace Court.

ARTHUR EVANS.

YOULBURY, BERKS., NEAR OXFORD,
September 10, 1934.

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Unique conditions of Excavation on site of Knossos.

In the long work on the site of Knossos which, with some interruption caused by the Great War, has engaged my own energies for the last thirty years and the preliminaries of which go back a good deal further, it early became evident that the problem of excavation was unique in more than one respect amongst monuments of the Past. The upper stories—of which in the 'Domestic Quarter' three successive stages were encountered—had not, as in the parallel case of other ancient buildings, been supported by solid piers of masonry or brick-work, or by stone columns. They had here been held up in a principal degree by a timber framework, the huge posts and beams of which, together with the shafts of the columns, were either supplied by the cypress forests, then existing in the neighbouring glens, or by similar material imported from over sea. The reduction, either by chemical processes or by actual burning of these wooden supports to mere crumbling masses of charcoal, had thus left vast voids in the interspaces. The upper floors and structures had indeed—in a manner that sometimes seemed almost miraculous—been held approximately at their levels by the rubble formation that had insinuated itself below—due largely to the falling in of bricks of unburnt clay, partly dissolved, from the upper walls.

Alternative of re-supporting upper stories or of complete ruin.

At the same time, whenever this intrusive material was removed, there was nothing to prevent the remains of the upper fabric from crashing down to a lower level. For the benefit of those who had not an opportunity of following in a practical capacity the long course of this arduous work, it is necessary once more to repeat that those who took part in it were confronted with only two alternatives. Either, at every step, the overlying mass had to be re-supported, or excavation itself would have reduced the remains of the upper stories—held up and preserved to us in such a marvellous fashion—to one indistinguishable heap of ruins.

Earlier materials employed unsatisfactory.

Such a catastrophic result was combated at first by means of wooden beams and posts, which, however, in the Cretan climate of violent changes showed a rapid tendency to rot. These were at first replaced by piers of masonry and shafts and capitals of columns laboriously cut out of stone, while upper pavements were supported by means of brickwork arches resting on iron girders. The expense of procuring from over sea girders of a length and calibre sufficient to span the larger halls was itself prohibitive. Owing, moreover, to the exposed character of the access to Candia by sea previous to the construction of the new port, and the frequency of fierce North-Westerly gales, the landing of the necessary materials was always a risky operation, and it has been already mentioned that two of the largest girders shipped from England lie at the bottom of the old harbour.

Problem solved by use of ferro-concrete.

Under these circumstances the introduction of the use of reinforced concrete was a real godsend, besides ensuring the additional advantage that the new work is at once distinguishable by the spectator. Piers and columns, with their capitals superimposed, could thus be moulded and the platforms of whole floors laid on over even the largest spaces, while the floors themselves at the same time have given a much necessary compaction to the surrounding walls.

Results tested by Earthquakes of 1926 and 1930.

The work of reconstitution already carried out in the important blocks throughout both wings of the Palace has been now tested by two earthquakes. The serious shock of June 26, 1926, that ruined houses in the neighbouring village and damaged the Museum in Candia, left even the upper structures of the Palace practically unscathed. That of February 1930, which was also severely felt on the site and throughout the neighbouring district, put a severe strain on the more recent reconstructions, which, however, they successfully resisted. It is worth remarking, moreover, that the only slight damage produced by these seismic shocks was the horizontal dislocation, to the extent of a few centimetres only, of a section

of a shaft and pillar, both of masonry construction according to the earlier procedure.

Lateral reconstruction for buttressing important structures

It is to be observed that in the course of this work of conservation it was found advisable in places to go beyond the immediate objective and to carry up to a certain height walls and structures forming lateral supports to parts of the fabric that it seemed desirable to preserve from shocks in a special manner.

An instance of this is given below[1] in the case of the upper structures of the North-West Porch, which served in fact for a buttress to the high back wall of the West Portico of the Northern Entrance Passage—itself of such importance as having served as a field for the noble frieze of stucco reliefs relating to bull-grappling scenes. A similar necessity occurred in the case of the West Wall of the South Propylaeum, upon which the 'Cup-bearer' fresco that originally found a place there has been restored in replica.

Reconstruction of S.-W. Columnar Chamber Pillar crypt below.

Adjoining the Propylaeum on this side was what appears to have been a little sanctuary chamber with a single column, the lower support for which was supplied by a gypsum pillar rising in the middle of a small corresponding space below, which, according to various analogies, would have represented a sanctuary crypt. Access was probably obtained to this, as in other cases, by means of a ladder from a trap-door above.

The upper chamber—recently restored, largely on account of the support it gave to the adjoining Propylaeum wall, and reproduced for the first time in Fig. 1—is itself of considerable interest in its bearing on the fine entrance system to the Palace from the South-West. It communicated with the light-area in front of the South Propylaeum by means of what has been interpreted as a double doorway, while two steps in its North Wall led down to it from the adjoining area at the back of the Propylaeum. Outside this doorway and the threshold in the adjoining corner, there was brought to light at an earlier period of the Excavation, in a pit about four metres deep, a considerable deposit of mature L. M. I *a* sherds, representing the same ceramic phase as the large accumulation of pottery found beneath the East Stairs. A figurine of an ox here occurred, and, among hundreds of small cups of the usual offertory class, were specimens covered with an unfixed pigment of a brilliant red, a ritual feature.

Deposit of L. M. I *a* Pottery—Votive figure.

The whole deposit clearly belonged to the votive class and may be taken to confirm the presumption suggested by the Pillar Crypt below that the adjoining Columnar Chamber had served a religious function

[1] See below, pp. 11 and 13, and Fig. 5.

FIG. 1. VIEW OF SOUTH-WEST COLUMNAR CHAMBER AS RECONSTITUTED; SHOWING PILLAR CRYPT BELOW.

Sanctuary character of Columnar Chamber.

and stood in some ritual connexion with the entrance system on its borders.[1]

[1] As the South-West angle of the building has been destroyed, it has been found convenient to arrange this South-West Chamber as the avenue of access to the 'South Propylaeum' for visitors entering the Palace by the 'West Porch'.

In the original Plans A and C,[1] neither the Columnar Chamber above, as brought out by the more recent investigations, nor the pillar crypt below had been defined. These, however, are shown in the emended Plans of this section of the building at the end of this Volume. Special plans of this area by Mr. Piet de Jong are also given in Fig. 2, *a* and *b*.

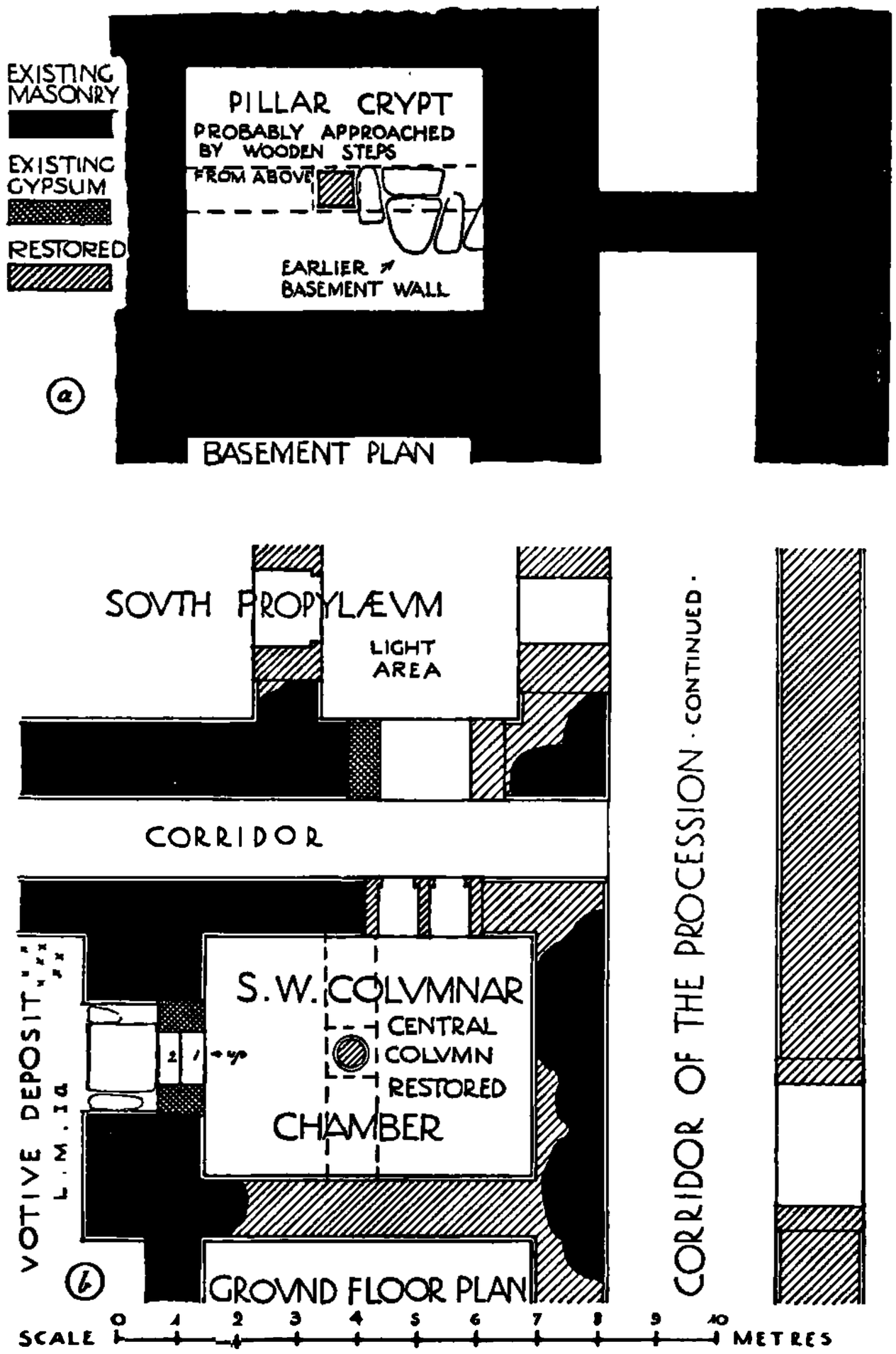


FIG. 2. *a*, GROUND PLAN OF S.W. COLUMNAR CHAMBER WITH ADJOINING SECTION; *b*, BASEMENT PLAN, SHOWING PILLAR CRYPT BENEATH.

A problem different from that concerned with the actual structures was presented by the considerable remains of painted stucco decoration found throughout the Palace, sometimes still clinging to the walls but to a much greater extent fallen from them. The scattered distribution of many of these remains, the parlous condition of some of them, the month-long study in many cases required for any attempt at their arrangement, made it necessary, when the preliminary arrangement had been concluded in our own workshop, that they should be transferred to the Museum. But it seemed a duty of the excavator to preserve, wherever practicable, the history of the building by replacing *in situ*—even when it entailed some reconstitution of the walls—replicas of the fresco designs as completed from the existing fragments.

Removal of remains to Museum.

[1] Contained in the pocket of Vol. ii, Pt. II.

Replicas of important frescoes replaced *in situ* on walls.

Happily, in attaining this desirable result, I had at hand the invaluable services of the artist, Monsieur E. Gilliéron, fils, of whose practised skill in reproducing the masterpieces of Minoan Art the preceding Volumes of this work bear sufficient evidence.

In this way, as by no other means, it has been possible to preserve something of the inner life of the old Palace Sanctuary, to a degree, it may be fairly said, more considerable than in the case of any other great monument of Antiquity.

Already, at the head of the 'Great South Road', beneath the site, the little refectory of the 'Caravanserai'—there built for the weary traveller—has gained much in actuality from the replacement in facsimile of the 'Partridge frieze'—as appetizing a provision for the guests as the still-life pictures of game in an old Dutch dining-room. So, too, to those entering the Palace on the South-West, the restoration of the fresco of the 'Cup-bearer' and some of his associates on the wall where it had originally stood in the 'South Propylaeum' may help to carry with it a vision of the whole long series of stately processional figures that originally rose in tiers along the winding Corridors that led from the ceremonial Western Porch to the entrance hall of the *piano nobile.*

Following out in the same way the entrance system from the South—which may itself have stood in relation with a 'Pilgrims' Way' to the Sacred Mountain of Knossos—the painted bas-relief restored in the Corridor above, brings with it as it were the visible presence of a Priest-king, who wears his lily crown and collar and walks in an Elysian field, leading, it would seem, his guardian Griffin.

In the Residential Quarter, again, on the Eastern side, as shown in detail in the last Volume, the imposing fresco of the Minoan shields suspended against the spiral band, that has been restored in the lower loggia of the Grand Staircase, suggests an impression of military parade that fits in with what seems to have been the more aggressive character of the later dynasty. In the spacious Reception Hall below, to which they lead, where the spiraliform bands alone are depicted, it has been thought legitimate to fill the void with facsimiles of the shields themselves. On the other hand the dancing figure, replaced in replica on a pillar of the adjoining 'Queen's Megaron', marks it as a scene of more peaceful diversions, while the 'Dolphin Fresco' of somewhat earlier date, here also restored in the inner section of the Chamber, gives an example of the naturalistic style of Art that reached such a high stage of development in the Middle period of the Palace.

It would indeed have been a splendid achievement to restore some

part of the painted high-reliefs of agonistic subjects, the *disjecta membra* of which were found precipitated from the great 'East Hall' that had once overlooked the Central Court on this side. But the restoration of the 'East Hall' itself, according to the plan given in the text, however probable, was still conjectural, and the remains of the plastic reliefs, though representing the highest artistic level ever attained by Minoan skill, were too fragmentary to admit of their full development.

Completion of this work N.-W. and N. of Central Court.

There remained, however, two outstanding points within the Palace border where this illuminating work of replacing *in situ* on the walls a record of the remains of their painted stucco designs in the same way as those already enumerated might yet be profitably attempted. These remains connected themselves with a more or less continuous area to the North-West and North of the Central Court, including on one side the 'Room of the Throne' and its surroundings, and on the other, the Western Portico of the Northern Entrance.

It had therefore been my intention mainly to devote the Season of 1930 to a continuance of the general work of reconstitution by its completion in this North-Westerly region of the site. As regards the first-mentioned field of work, which included the restoration of the upper structures of the Throne Room itself and the roofing over of its ante-chamber, the results will be described in detail in a later Section of this Volume.[1]

Reconstitution of W. Portico of N. Entrance Passage.

The other task—which concerned the West Portico of the Northern Entrance Passage—might be regarded as the culmination of all these attempts at artistic reconstruction carried out throughout the whole area of the building. To those arriving at what may be called the 'Sea Gate' of the Palace from the Harbour Town—as, in later days, to the Achaean Vikings who first penetrated to the site through that haven—it offered the first glimpse of the mighty pile reared as their central residency by the Minoan Priest-kings. Immediately backed as it was by the ancient Keep that had formed the original nucleus of the whole edifice, this entrance system never to the last lost its character of a fortified approach.

Nor had the architect who restored the building after the great destruction at the close of the Second Middle Minoan Period failed to avail himself of this vantage point to superimpose on the massive bastions of limestone masonry that formed its substructures a singularly impressive decorative scheme.

Those who came up from the Harbour Town, including travellers

[1] See below, Section 115.

from over sea, entered the Palace through the outer 'Sea Gate', facing West, and thence passed into an elongated open area flanked by the piers of the 'Northern Pillar Hall', and, turning to the right up this, passed through the Inner Gate into an ascending passage-way of narrower dimensions. This was overlooked on either side by the colonnades of two Porticoes, supported by triple blocks of masonry to which, for convenience, the name of 'bastions' has been applied though the gaps between them were filled by solid timber baulks, so that in fact the whole formed a single mass. Beyond the upper border of that to the right evidence was preserved of the steps by which the covered platform of the Portico was reached from the roadway.

The whole of the upper masonry of the structural supports of the Eastern terrace block had been removed at some later date for other uses, but of that which overlooked the entrance passage on the West all the courses were in places preserved up to the level of the horizontal beams, which, according to the regular practice, would have supported the coping slabs of the terrace level. Near the Northern extremity of the terrace, moreover, one of the column-bases of its colonnade was found only slightly below its original level.[1]

Restored Plan of area.

All the elements, in short, for complete reconstitution of the Western Portico, including large parts of its back wall, were preserved, and it had been thus possible for Mr. Piet de Jong, the Architect of the British School, to execute for me on the basis of these the restored drawing of the entire inner entrance system, here reproduced (Fig. 3).[2]

But the magnificence of the whole scheme centred in the fine plastic compositions in painted stucco—equivalent in hardness to the Italian *gesso duro*—that had originally adorned the back walls of both Porticoes. Of that on the Eastern side only a few scattered fragments were found below.

Painted relief compositions of two Porticoes relating to bull-sports.

Of the coloured reliefs that had found their place beneath the Colonnade to the West a whole series of remains were preserved, lying at intervals at about the same level along the whole length of the terrace.

In all cases these fragments belonged to subjects connected with the bull-sports that in such an extraordinary measure had engrossed the interests of the Palace-dwellers—an interest, which, as is shown by the 'Temple Fresco' and some new and surprising evidence given below, was shared in a singular degree by the Minoan Goddess herself.

Reasons have been given in the preceding Volume of this work for the conclusion that the painted relief compositions which seem originally to have faced each other at the back of the Galleries on either side of the Northern

[1] Compare the fuller details in *P. of M.*, iii, p. 160 seqq.

[2] See *P. of M.*, iii, p. 162, Fig. 107.

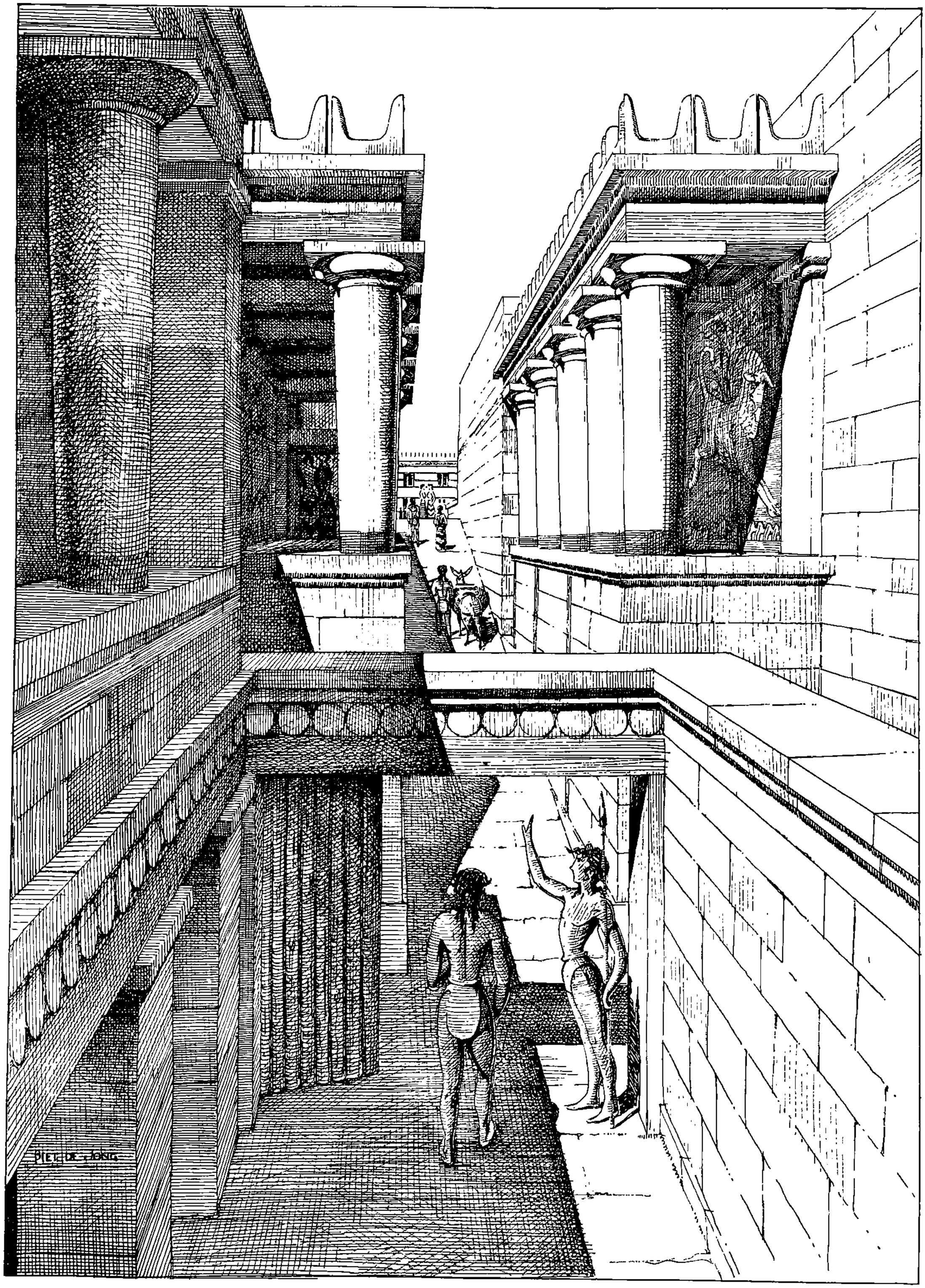


FIG. 3. RESTORED DRAWING SHOWING INNER GATEWAY OF NORTHERN ENTRANCE PASSAGE AND PORTICOES OVERLOOKING ASCENDING GANGWAY BEYOND. BY PIET DE JONG.

Comparisons made with bull-grappling scenes of Vapheio Cup and relief from 'Atreus' Tomb.

Entrance Passage exercised a lasting influence on all later Minoan Art, in its Mainland as well as its Cretan home. The view is there expressed that the groups in the respective Porticoes in fact corresponded, at least in their main features, with the two contrasted versions of bull-hunting scenes as presented to us in a perfect form on the gold cups from the Vapheio Tomb.[1] Both series of groups illustrate the sport as seen practised in the open—in the palm- and olive-grown glens of the country-side. In the one case we see a drive of the half-wild animals, in the other their capture by means of a decoy cow.

Of still more suggestive interest is the circumstance to which attention has been also called,[2] that both of these dual schemes are reflected in what seems to have been a bas-relief frieze round a kind of fore-hall to the 'Atreus' Tomb at Mycenae. Among the sculptured fragments brought home by Lord Elgin were parts of two reliefs, one of them showing the two fore-legs of a stationary bull recalling the same portion of the animal lured by the cow in the last-mentioned Vapheio scene, while the other presented the head of a charging bull with the same lowered pose, cocked ear and protruding tongue as one of the galloping bulls of the other Vapheio goblet. What adds to the probability that both these types and the scenes to which they belong are derived from originals supplied by the monumental work above the Northern Entrance Passage is, that they are carved on slabs of Knossian gypsum.

The latter piece also shows, above the bull, part of the foliage of an olive-tree, such as we find associated with the Palace composition. A completed restoration of this painted relief by Monsieur E. Gilliéron, fils, is here repeated in Fig. 4.[3]

Unlike the case of the high relief fragments from the great 'East Hall', the fallen remains of the plaster composition at the back of the Western Portico offered some elements of reconstitution, while, for their setting up, the existing remains of the back wall had only to be raised to their original height. A considerable part of the two olive-trees—the place of which was indicated by their plaster edges to be at the beginning and the end of the composition—was capable of being pieced together. At the same time the largest of all the fragments supplied the complete head of the charging bull referred to, into connexion with which could be brought an extended forefoot. A small section of highly conventionalized rockwork foreground had also come to light.

[1] *P. of M.*, iii, p. 177 seqq.
[2] *Ibid.*, p. 192 seqq.
[3] Reproduced from *P. of M.*, iii, p. 197, Fig. 135. From a drawing by Monsieur E. Gilliéron, fils.

With such materials to work upon and the expert assistance both on the structural and artistic side that was happily at my disposal, the reconstitution of the 'Western Portico' was set in hand. This had to be so far

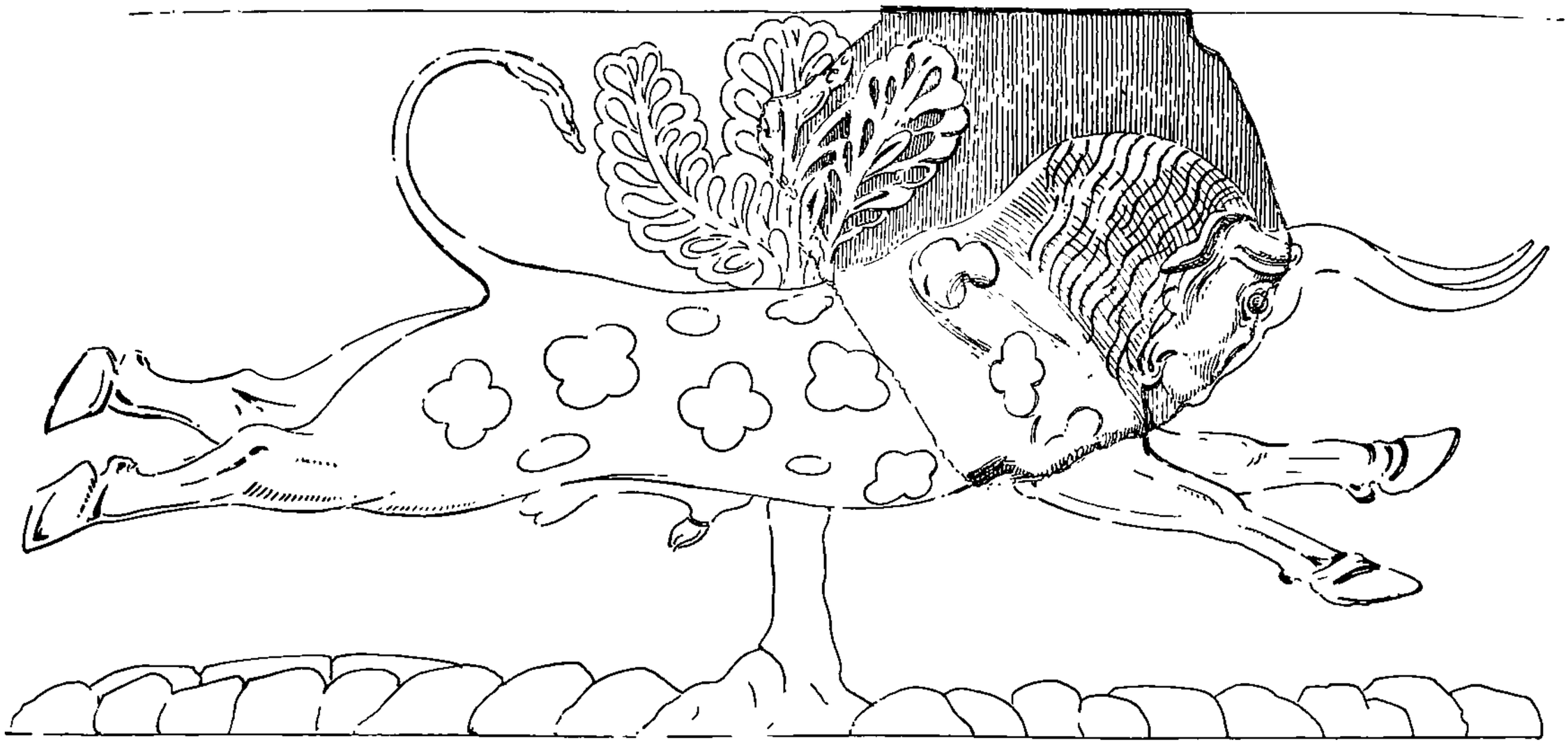


FIG. 4. CHARGING BULL, COMPLETED FROM RELIEF ON GYPSUM SLAB FOUND OUTSIDE 'ATREUS' FAÇADE, MYCENAE.

carried out as to afford the necessary backing and shelter for the proposed replacement in replica of the best preserved section of the painted relief presenting the forepart of the charging bull with an olive-tree in front.

Restoration of upper elements of North-West Porch.

The structural work necessary for this was itself considerable, since it involved not only the re-building of the Northern Section of the back wall of the Portico, together with its roofing over, and the replacement of the supporting columns (see Figs. 6, 7), but other contingent work, mentioned below, on its farther side (see Fig. 5).

To obtain a fair measure of security against the dislocation of the high back wall by earthquake shocks it was necessary to raise considerably the height of the line of walling that ran at right angles West from the section now roofed over.

This line represents that of the back wall and entrance system of the North-West Porch, now brought into new relief by the work of reconstruction. The resulting effect is given in the photographic view (Fig. 5), where the limestone masonry of the back of the Portico, overlooking the Northern Entrance on this side, is seen to form the back wall of the narrow light-well of the adjoining Porch, rising twelve courses above its pavement. The two column-bases on the face of the covered section of this

FIG. 5. 'NORTH-WEST PORTICO' AND ENTRANCE AS PARTLY RESTORED SHOWING BACK WALL OF ADJOINING PORTICO OF NORTHERN ENTRANCE PASSAGE.

Porch are here shown, the inner of these of fine grey and white variegated limestone of the high Middle Minoan type, the outer restored in cement above its existing base blocks. The single doorway in the corner formed the entrance to one of the usual guard-rooms of the Palace entrances, while the double opening beyond gives access to the open ramp passage that winds round the Northern and Western flank of the old Keep, and thus ascends to the North-West corner of the Central Court. This North-West Porch, as already suggested, seems to have been specially devised to supply access for the devotees who had first passed through the neighbouring 'Initiatory Area' on their way to the Central shrine of the Palace Sanctuary.[1]

To the right of the Porch is shown part of a line of doorways that opened into the Fore-Hall of that Area and another, at right angles to this, leading into the entrance passage of the 'Lustral Basin', now roofed over.

West Portico of N. Entrance Passage as restored.

Of the effect, as seen from the border of the Central Court, of the partial reconstruction of the Western Portico of the Northern Entrance Passage, some idea may be gathered from the photographic figure (Fig. 6). At the near end are the restored steps leading up to its platform from the central gangway, and a glimpse of the section of painted reliefs—as seen in position on the back wall—appears beneath the covered portion of the gallery. The lower part of the Northern entrance system is visible below and—beyond the cypress grove to the left and the range where stood the Royal Tomb of Isopata—a little glimpse of sea.

In Fig. 7, which shows the same group of structures as seen from below, three of the stone piers of the Entrance Hall 'of the Eleven Pillars' appear in the foreground on the left, and a good view opens of the ascending paved way leading to the edge of the Central Court. Above this the peak of Juktas rises in such a symmetrical position with regard to this entrance passage as to suggest that it had actually formed a fixed point in planning the *Cardo* of the original building.

Here, beneath the restored entablature and roof of the Portico, the painted stucco relief is a salient feature, and must have struck the eye of all those who made their way from the Sea Gate to the Central Court of the Palace.

Section of its painted reliefs replaced in replica.

From the size of the restored plaster relief—over three-and-a-half metres in height and of greater width—its replacement on the wall was a matter of some difficulty, and it could only be done in two pieces. It is reproduced in Fig. 8. The head of the galloping bull is here more lowered, as is also the case with the Elgin relief, but the scene can hardly be

[1] *P. of M.*, i, pp. 422 and 424.

FIG. 6. VIEW LOOKING DOWN ON WEST SIDE OF NORTHERN ENTRANCE PASSAGE SHOWING RECONSTITUTED PORTICO.

interpreted otherwise than as a variant of that which on the Vapheio Cup A forms the concluding episode of the drive of bulls, some of whom seem to

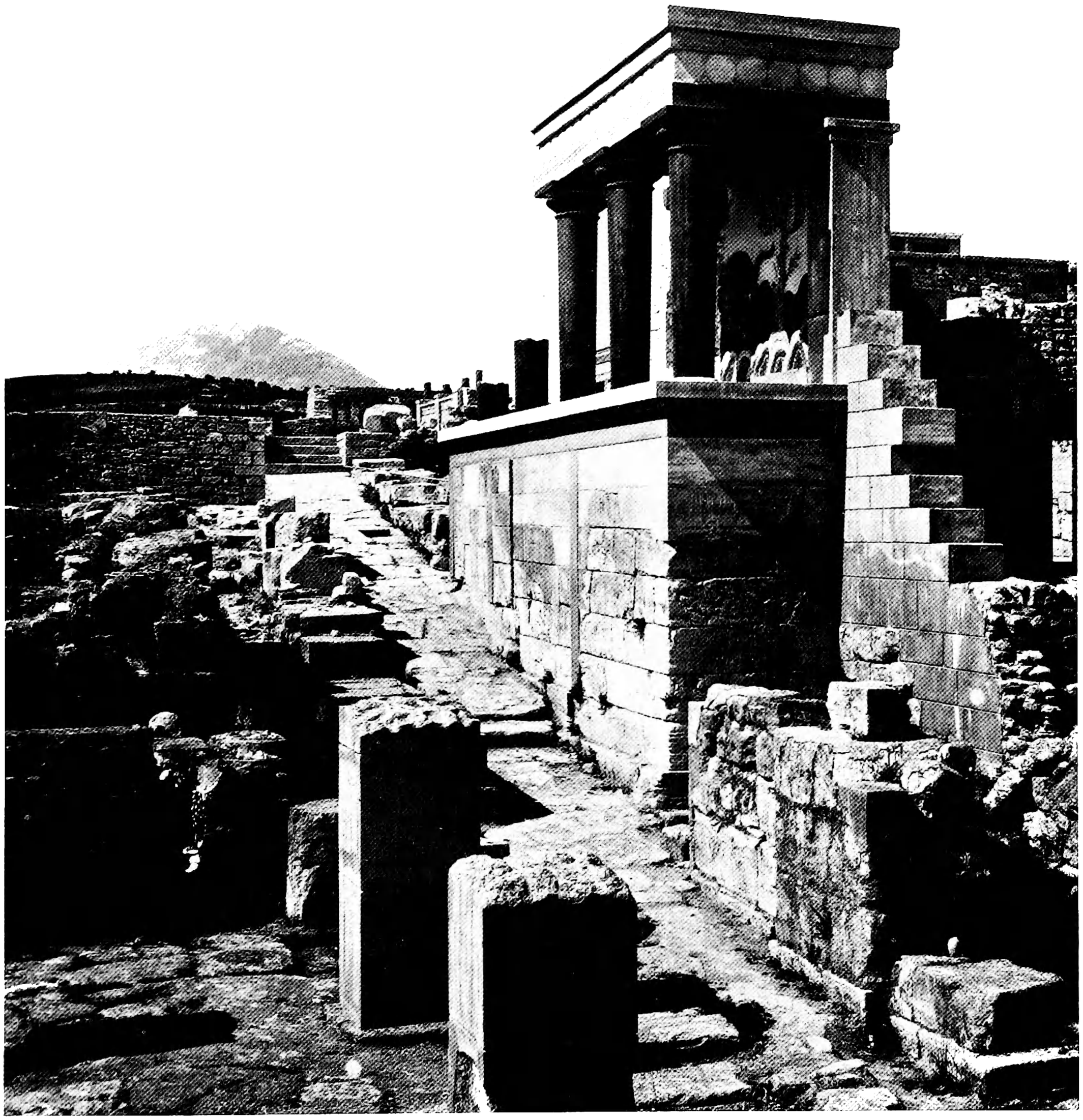


FIG. 7. VIEW LOOKING UP WEST SIDE OF NORTHERN ENTRANCE PASSAGE, SHOWING RECONSTITUTED PORTICO ABOVE. MOUNT JUKTAS IS VISIBLE ABOVE STEPS LEADING TO CENTRAL COURT.

have escaped the net drawn across their path. A further difference may be also noted in the character of the tree, which in the case of the goblet is

a palm, though on the other cup we see wild olive-trees. On the Elgin slab, however, an olive-tree rises behind the back of the bull.

Painted relief of bull and olive-tree.

Attention has been already called to the remarkable technique of the olive-tree foliage, the sprays of which are displayed on slightly bossed surfaces, while the alternating colour of the leaves with the light underside contrasting with the dark upper surface, and the bright red, witnessing the persistent attachment of autumn leaves, shows close observation of the characteristic appearance of the olive-tree, and of its seasonal variations. Equally naturalistic is the magnificent head of the animal itself. It is therefore all the more surprising to see, side by side with such vivid realism, a rocky foreground of such a highly stylized character. This feature also, however, finds some analogy in the rendering of the rocky foreground of the scenes on the Vapheio Cups where the waved outline encloses corresponding inner spaces with pitted surfaces.[1] In these we may trace the same imitation of the grain of breccia or conglomerate, in conformity with the usual Minoan convention in reproducing rock-work.[2]

Noble bull's head.

Of the head itself, which is that of a gigantic bull of the Urus breed, it may be sufficient to repeat the description already given.[3] It is simple and large in style, but instinct with fiery life. The moulding, though partly in a lower plane, merges into very high relief in the treatment of the eye and forehead, while the upper contours of the ear are executed in the round. The surface is of a deep ruddy hue with a bluish white spot of cusped outline on the bridge of the nose. The pupil of the eye is of a yellowish white, and the eye-ball, ringed with coloured bands, is exceedingly prominent. The upstanding ear marks intense excitement; the tongue protrudes, the hot breath seems to blow through the nostrils. The folds of the dewlap show that the head was in a lowered position—it is that of a bull coursing wildly. Part of the leg of a female cow-boy was alone left to mark the sensational human side of the spectacle.

From the high ground level on which the remains had fallen, it may be inferred that this monumental work was still in position on the wall of the Portico at the time when the first men of Greek stock made their way through the old Sea Gate of the Palace.

[1] Compare *P. of M.*, iii, pp. 183, 184, Figs. 126, 127.

[2] See *ibid.*, p. 171, Fig. 115. The upper rockwork convention here seen above the bull, introduced as a filling decoration, is warranted by the rockwork seen above the coursing bull in the parallel scene on the Vapheio Cup.

[3] *Ibid.*, iii, pp. 172–4.

FIG. 8. SECTION OF COLOURED RELIEF OF CHARGING BULL AND OLIVE-TREE, AS RESTORED BY MONSIEUR GILLIÉRON, AND REPLACED ON BACK WALL OF WEST PORTICO.

Can it be doubted that this and other works with which this scene was connected—including the complete human figures of both sexes, of which fragments were also found—found an echo in the legends of the Minotaur that grew up about the spot?

These charging bulls and their human victims on the Palace walls may well have added a grimmer touch to the man-bull—distant offspring of

Greek interpretation of Minotaur.

Ea-bani—that had already played a part in Minoan cult scenes.[1] A remarkable cornelian intaglio from Crete (Fig. 9)[2] of late Greek work though with Minoizing features, shows Theseus—a sea-serpent behind—attacking the Minotaur with a short sword, much as Oedipus is depicted stabbing the Sphinx on the gold Minoan bead-seal from Thisbê.[3]

A Minoizing bead-seal.

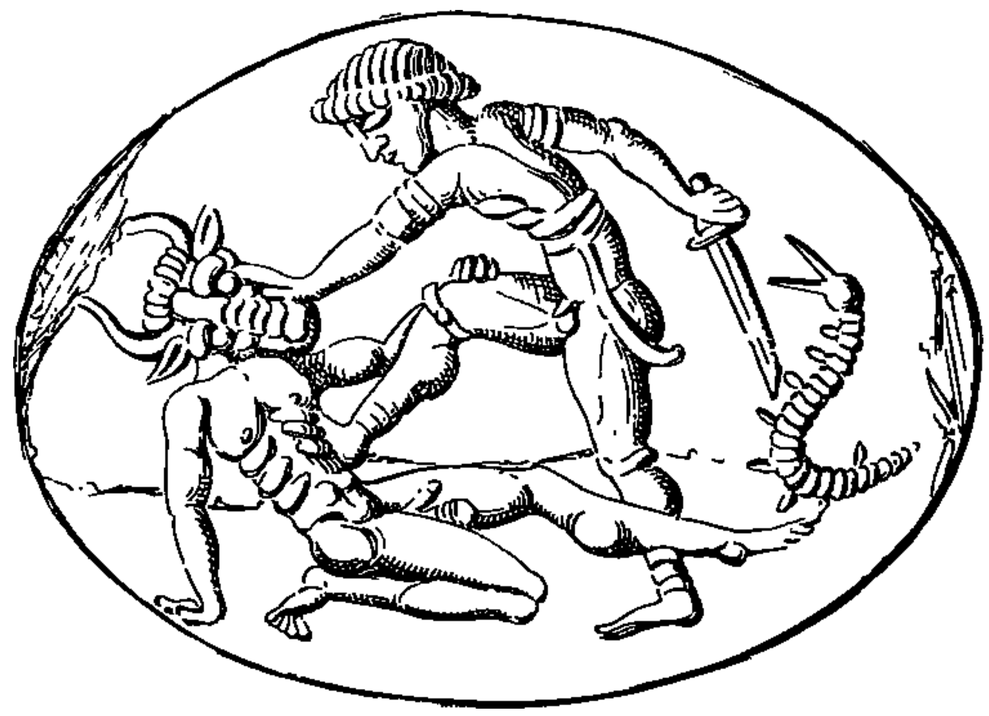


FIG. 9. LATE GREEK BEAD-SEAL FROM CRETE: MINOIZING TYPE.

It was, as already pointed out,[4] some thirty metres beyond the walled outwork of the Northern entrance that an intrusive well was struck containing pottery of the Geometrical Greek Period—the nearest evidence of later Greek settlement that occurred in the whole circuit of the site. Elsewhere such remains lay well outside not only the Palace but its immediate borders and the surrounding Minoan houses. A Roman cement pavement had blocked the level space of the Theatral Area—Greco-Roman wells had intruded themselves to the borders of the House of the Frescoes, and elsewhere in the outer radius other sporadic intrusions of late date were traceable. But from the end of the partial re-occupation of the building by humbler denizens of the same Minoan race—alike on the Palace site and its precincts—no sign of later settlement has come to light. Only, off the Central Court, hard by the borders of the Central Sanctuary of the old Priest-kings, the sealings of which record its lion-guarded Goddess, some five centuries later, at a time when her cult had been largely assimilated by Hellenic Knossos, the small, plain temple of which we have the foundations,[5] was set up, as if to reconsecrate to later religious uses the site haunted now by the monstrous creation of popular fancy. It is natural to identify the later shrine with the 'House of Rhea'—the Minoan Goddess in her Greek guise—of which, according to Diodoros, the foundations were shown in his day by Knossos.[6] Her Cypress grove, the straggling remains of which still survive in the glen below, may then have covered the whole hill of Kephala.

Haunted site left derelict except by 'House of Rhea'

[1] See especially the haematite cylinder found in Crete, p. 459, Fig. 383 below, where the man-bull is coupled with a Minoan Genius.

[2] Central Crete: A. E. Coll. The stone is mostly covered with a calcareous enamel, due to running water.

[3] P. 514, Fig. 457 *a* below.

[4] *P. of M.*, i, p. 404.

[5] *Ibid.*, ii, Pt. I, pp. 5, 6, and Fig. 2.

[6] Diod. v. 66.

§ 91. The Minoan Goddess as Patroness of the Palace Bull-ring—New Chryselephantine Image of her as 'Lady of the Sports': Sacrifice of *Corrida* Bulls and its Survival.

*Bull-sports of Palace Arena as illustrated by the wall-paintings and reliefs; Pillar Shrine of Goddess depicted overlooking Bull-ring; Sexual transformation of girl performers—their male 'Sheath'; Anatolian source of bull-sports—divinity there male; Varied aspects of Minoan Goddess; Her interest in Games; Her Sacred Swing—terra-cotta model; Doves perched on its side-posts—emblems of divine possession; Swinging as magical and religious rite—*Aiora *festival at Athens; Swinging in Modern Greece and Crete; Normal impersonations of Goddess, in fashionable dress, unfitted for Sports; New Chryselephantine figure of Goddess in garb resembling Taureador's; With matronly corset, however, combined with male loin clothing and masculine 'cod-piece' attached—Minoan adaptation of 'Libyan Sheath'; Facial features of figurine: Classical profile, like Cambridge Goddess; Emergence of new statuette with similar features; Diadem and coronal of Chryselephantine figure; Its broad necklace—sign of rank; Height and girth of statuette—comparisons with adult male figures; Comparison with 'Boston Goddess'; 'Lady of the Sports', still a Mother Goddess; Her aid constantly invoked by her* protégés *of the Bull-ring; A Vision of comfort in direst need; Sacrifice of bull of* Corrida *on Thisbê seal-type—a priestly* Matador; *Gem-types showing sacrificed bull on Table; Sacrificed bull on Table in H. Triada Fresco; Funereal sacrifice of bulls; Offertory animals depicted as coursing in Arena: Survivals of Minoan bull-sports—Thessalian* Taurokathapsia; *Artemis Tauropolos and Taurobolos; Survival of Minoan bull-sports as religious function at Miletos, an old Cretan foundation; Bull sacrifice at the* Boegia.

There can be no question that the episodes of the Minoan bull-sports as seen in the West Portico of the Northern Entrance at Knossos presented 'Cow-boy' feats in some open area or Minoan park, bordered by rocky crags and olive woods. If, as we may infer, the fellow composition set in the opposite Eastern Gallery related to the lassoing of a bull inveigled by a decoy cow, it, too, equally belonged to the country-side.

Bull-sports of Palace Arena and their Illustrations.

But, as has been shown in the preceding Volume of this work, another class of bull-sports, well represented on the Palace walls, is entirely divested of any such rural background, and must as clearly have found its

Bull-sports of Palace arena.

place in some arena or 'ring' constructed for the purpose. Unfortunately, none of the remains of this class occurred under conditions that might enable them to be even partially replaced—as in the case of the bull-reliefs of the Northern Entrance—on the actual walls to which they belonged. A portion of the hind-quarters of a galloping bull, found still attached to the left wall of the West Porch, was too incomplete to admit of any restoration.[1] In the case, again, of the fragments, on a smaller scale, of the 'Taureador Frescoes', found above the floor-level by the 'Court of the Stone Spout', the upper story walls that they had once decorated were no longer in existence. The same difficulty occurred with regard to the 'Miniature Frescoes', belonging to what seems to have been a small corner shrine situated at the angle of the Northern Entrance Passage on its West side and of the Central Court, one of which, the 'Temple Fresco', has such an intimate connexion with these circus sports. The room above the Throne has now been turned into a Museum for these derelict wall-paintings.

Illustrative frescoes.

Pillar Shrine of Goddess overlooking Bull-ring.

Pillar Shrine of Goddess overlooking bull-ring.

In view of a remarkable find to be described below, the Temple Fresco itself acquires a new significance. The pillar shrine of the Goddess, as there seen,[2] is set in the middle of Grand Stands crowded with spectators of both sexes, much as if it were the Royal Box of a Court Theatre. As to the character of the show itself, moreover, we are sufficiently enlightened from two sources. The 'Miniature' fragments from the 'Ramp House' at Mycenae, which exhibit groups of Minoan ladies seated in boxes, also include part of a scene from the bull-ring. On the other hand, a small but valuable piece of painted plaster in the best 'Miniature' style from the Ivory Deposit at Knossos once more brings these circus performances into the most direct connexion with the supreme Minoan divinity. Part of the neck and back of a coursing bull is there seen in front of a columnar building, the entablature of which presents alternative versions of the Sacred Double Axe symbol.[3]

It is also to be observed that the peculiar type of superposed pillar that marks the grand stands flanking the Central Shrine of the 'Temple Fresco' are used in the reliefs of Minoan 'rhytons'—like the Doric or Ionic columns that represent temples in Greek vase paintings—as indications of the religious sanction under which the sports were held. A bone capital of one of these[4] was found with the bull's head and leaping youths of the 'Ivory

[1] The fragments showed several painted stucco surfaces superimposed.

[2] Vol. iii, Coloured Plate XVI, opp. p. 47.

[3] *P. of M.*, iii, p. 207, Fig. 141.

[4] *Ibid.* p. 435 and cf. p. 64, n. 1.

FIG. 10. DEVELOPMENT OF THE TWO LOWER ZONES OF STEATITE RHYTON FROM HAGIA TRIADA, SHOWING BOXING BOUTS.

Deposit'. These pillars are set beside the favourite boxing bouts, such as are shown on the zones of the 'rhyton' (Fig. 10).[1]

Sexual Transformation of Girl Performers: wear Male Sheath.

Sexual transformation of girl performers: their male sheath.

A ceremonial feature, affecting all classes of the bull-sports, and which must be distinctly regarded as of a religious nature, is to be seen in the head-gear of the female performers. These, as may be gathered from their elaborate coiffure and the gay *bandeaux* that some of them wear, clearly occupied a good social position. Thus in the exquisite design of a leaping girl performer given in Fig. 11,[2] her carefully curled locks are confined by a blue ribbon and she wears a beaded necklace. But the most notable feature in the costume of girl performers was of a very different kind. As participants in the feats of the *taurokathapsia* these trained girl athletes—who may be thought to represent the presiding Goddess in a superior

[1] See *ibid.*, i, p. 688 seqq., and iii, p. 62 seqq.

[2] For a coloured reproduction of this figure, see *ibid.*, iii, Pl. XXI, and p. 216 opposite. The female performer there wears a blue ribbon round her head.

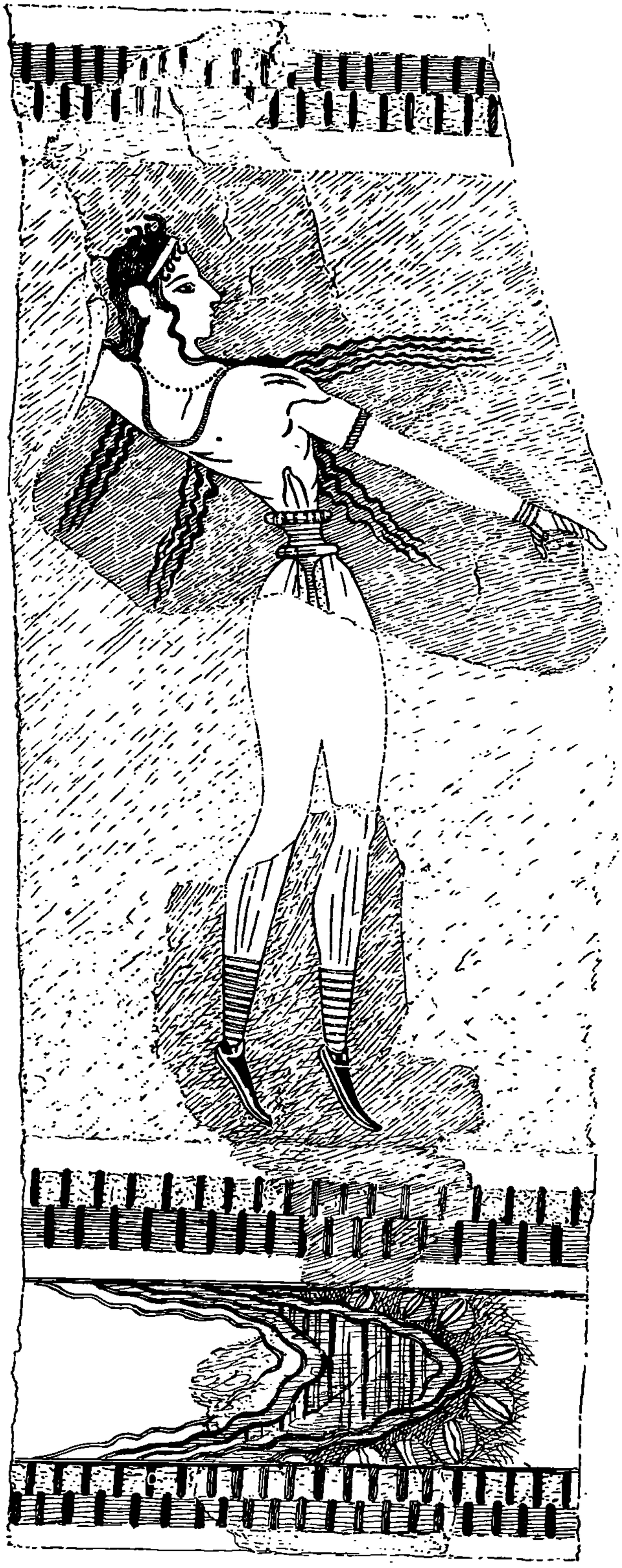


FIG. 11. GIRL PERFORMER OF BULL-RING.

degree—had to first undergo a kind of sexual transformation, by divesting themselves of all articles of feminine dress except their head-gear and necklace, and by adopting the sporting costume of the male performers, including the universal exterior sign of the masculine sex, the Minoan version of the 'Libyan sheath', Fig. 12.[1]

So far as the existing evidence goes, as supplied by wall-paintings, small reliefs on steatite rhytons, and the gold cups and seals or their impressions, these female performers travestied in men's attire do not appear in connexion with other forms of sacred sports, such as the boxing and wrestling bouts. On the other hand, they are common to the bull-driving and 'Cow-boy' feats, as seen in the open country, equally with those of Palace Circus. A very clear example of a girl performer, distinguished both by her luxuriant tresses and elaborately curled fringe as well as by a slight pectoral development, has been already noticed in the case of the Vapheio Cup A, where she is seen in difficulties between the horns of a charging bull.[2]

[1] This figure is taken from *P. of M.*, ii, Pt. I, Suppl. Pl. XIII.

[2] *Ibid.*, iii, p. 182.

Were the Bull-sports originally connected with Male Divinity?

This ritual assimilation to the male sex is a make-believe of the same kind as that which led wives of Libyan chiefs to adopt the native *penistasche* of the men or the analogous custom of the Queens of Meroê of asserting their titular kingship by wearing false beards.[1] In such cases it implied a recognition of the fact that government was of rights a male prerogative; in the present instance it may well convey a hint that these sensational feats of the bull-ring were in the same way at one time exclusively performed by men.

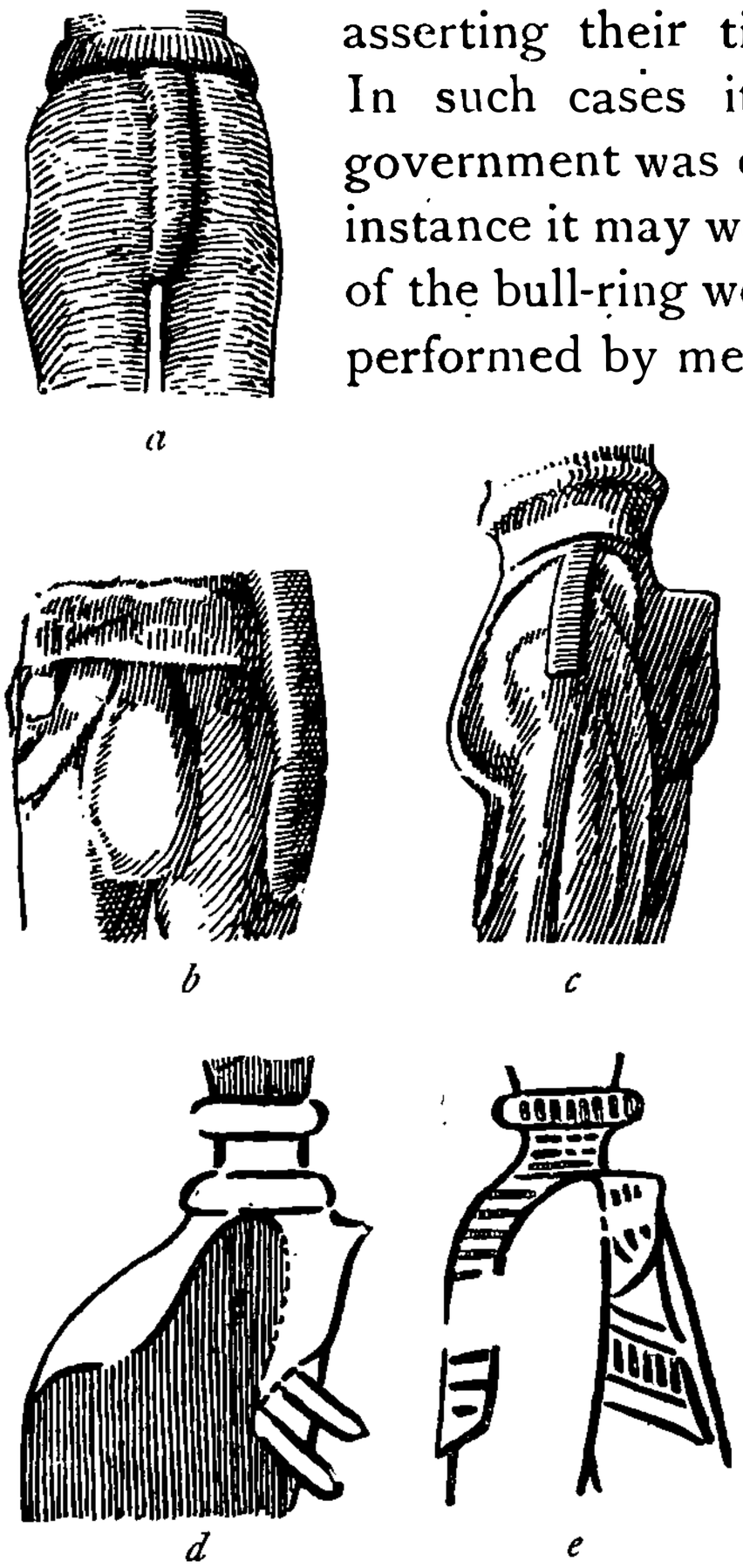


FIG. 12. MINOAN ADAPTATIONS TO 'LIBYAN SHEATH'. *a*, *b*, FROM M. M. III *a* FIGURINES (PETSOFÀ); *c*, FROM BRONZE FIGURE OF YOUTH, M. M. III; *d*, *e*, FROM 'TAUREADOR' FRESCOES; *e*, ON GIRL PERFORMER.

It is to be observed in reference to this conclusion that existing indications point to Western Asia as the original home of these acrobatic sports with bulls in a purely male connexion. Scenes of this class occur on a sealed clay envelope from Cappadocia, dating from about 2400 B.C. Ceremonial coverings for bulls such as we later see on Minoan 'rhytons' of that form—themselves of old Chaldaean derivation—find their analogies on the same group of cylinders as that illustrating the sport.[2]

Anatolian source of bull-sports—connected there with male divinity.

On the other hand, the Minoan Goddess as divinity of the Double Axe fits on as a religious entity to a well-known group of Lightning Gods on the Anatolian side, such as may well have presided over these sports as performed at a very early date in that region. In this connexion is noteworthy that on the 'Miniature' fresco fragment above referred to, the Double Axe symbols repeated on the frieze of the Goddess's shrine, overlooking the bull-sports, emphasize this aspect of her divinity.

[1] See *P. of M.*, ii, Pt. I, p. 35, and cf. Oric Bates, *Eastern Libyans*, pp. 123, 114; and P. Newberry, *Ancient Egypt*, 1915, pp. 101, 102, and Fig. 4.

[2] *P. of M.*, iii, p. 205, Fig. 140, *a*, *b*.

May not this sexual transformation of her female ministrants who took part in the performances held in her honour itself have been due to the consciousness that in their original shape they had rather belonged to a male form of divinity?

Varied Aspects and Attributes of Minoan Goddess.

Varied aspects and attributes of Minoan Goddess.

Of the Goddess herself associated in one way or another with her sacral weapon we have abundant illustrations, and it forms an ingredient of cult groups in which she appears with other attributes, such as the dove of her celestial sovereignty or the snake that symbolizes her infernal power. Special manifestations of the divinity occur with various attributes, as where the Snake Goddess is seen holding a ritual sprinkler or *aspergillum* in one hand and a sword in the other—the respective symbols, that is, of spiritual and temporal dominion.[1] So, too, the Goddess, with an axe-like appendage depicted on a Tablet of Class A—of naval import—is holding out a simple form of anchor.[2] Elsewhere we see the Lady of Beasts—*πότνια θηρῶν*—with wild animals such as lions, and Cretan wild goats as her supporters, or swans grasped by their necks. At times she is the Huntress—an early form of the Cretan Diktynna—pursuing a stag with bow and arrow. Or again, she meets the eye descending from her celestial sphere towards female votaries engaged in a sacred dance.

Her interest in games.

That she interested herself in games may be inferred from remains of the draught board found in the Repository of her Central Shrine at Knossos.[3] The cupped table found in the pavement of the Mallia Palace, though suggestive of gaming, there certainly fulfilled a sacral function.

Sacred Swing of Goddess: Terra-cotta Model from Phaestos.

Her Sacred Swing:

A remarkable find made in a Phaestos shrine[4] must be taken to show that the Minoan Goddess took delight in a much more simple, not to say childish

[1] *P. of M.*, ii, Pt. II, p. 792 seqq., and Fig. 517.

[2] *Ibid.*, ii, Pt. I, pp. 248, 249, and Fig. 145 *a*: for the axe-like appendage cf. *ibid.*, i, pp. 615, 616, and Fig. 452.

[3] See *Ibid.*, i, p. 472 seqq.

[4] R. Paribeni, *Mon. Ant.*, xiv, p. 747, Figs. 42, 43. As has been noted by Nilsson (*Minoan-Mycenaean Religion*, p. 286, note 8), the rude idols, found near, point to that conclusion. The chronological data supplied by the finds also suggest an extended period; a metal dagger, perhaps copper, looks Early Minoan (*Mon. Ant.*, xiv, Pl. XLIV, 5); the steatite Sphinx and a perforated clay vase (*Ib.*, p. 475, Fig. 41), as also, possibly, the round, bezelled gold finger-ring (*Ib.*, p. 735, Fig. 34), may be M.M. III *b*, while an imported scarab from the same deposit bears the name of Queen Thii (*c.* 1450 B.C., *Ib.*, p. 735, Fig. 33). These discrepancies of date favour the view that the chamber in which the objects were found belonged to a sanctuary rather than a tomb.

diversion. In a deposit explored by the Italian Mission, probably belonging to a small domestic shrine like that of Gournià,[1] was found a small female statuette, with red decoration on a white wash, in a half sitting position and

terra-cotta model from Phaestos.

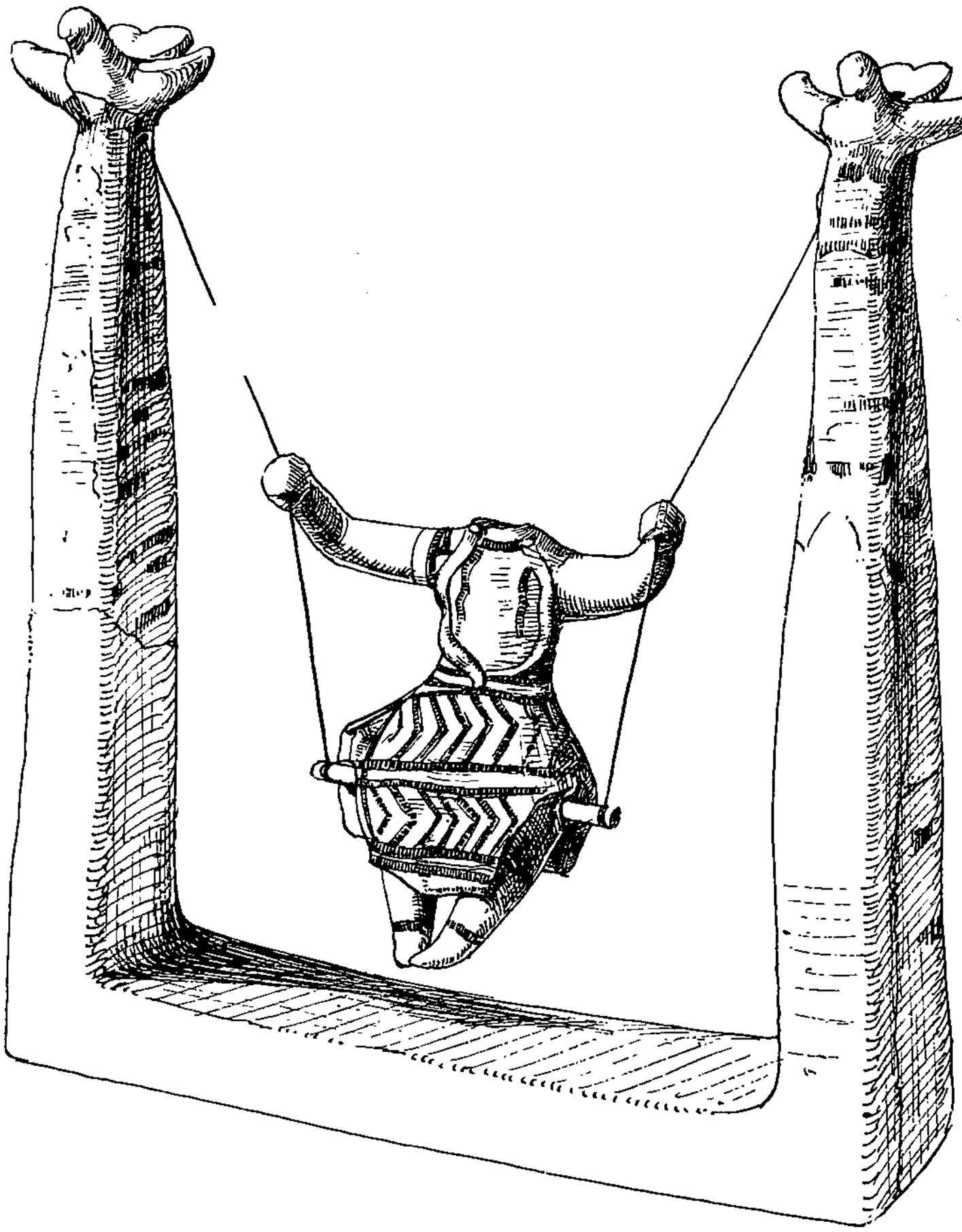


FIG. 13*a*. TERRA-COTTA REPRESENTATION OF VOTARY SWINGING BETWEEN TWO POSTS WITH DOVES PERCHED ON THEM AS A SIGN OF DIVINE POSSESSION.

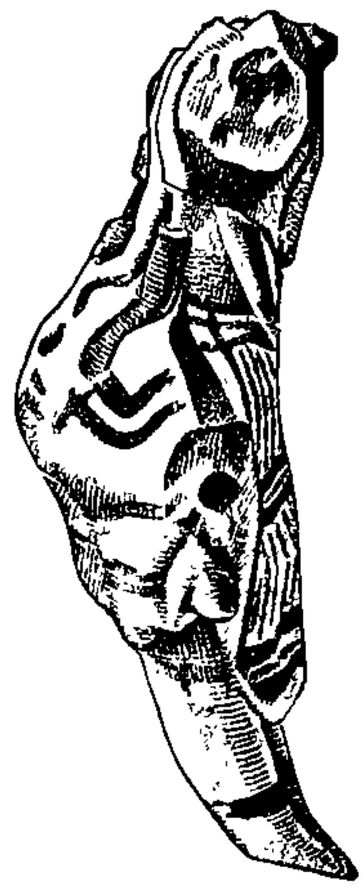


FIG. 13*b*. SIDE VIEW OF FIGURE, SHOWING PERFORATION.

bored for the insertion of a bar. With it lay remains of two posts like truncated obelisks in their general form and perforated, near their apex. It has thus needed only a little thread to restore—as has been done in the Museum of Candia—the whole group into a figure on a swing. The thread is attached to a miniature bar that serves as a seat (Figs. 13 *a* and 13 *b*).[2]

Doves perched on side-posts of swing:

The two side-posts are of special interest since they afford a near parallel to the columns of the early terra-cotta Shrine from Knossos[3] with

[1] Boyd-Hawes, *Gournia*, pp. 47, 48.

[2] Fig. 13 was drawn for me from the original terra-cotta object as restored by Monsieur E. Gilliéron, fils, with the kind permission of the Director of the Candia Museum and of the Italian Mission.

[3] *P. of M.*, i, pp. 220, 221, and Fig. 166, F.

emblems of divine possession.

the doves perched on their capitals, and to the palm trunks on either side of the Double Axes surmounted by birds of raven-like aspect.[1] The settled birds that here too impersonate the alighting of the divine Spirit on to the baetylic pillars, though imperfectly preserved, are in this case, too, marked as doves by the remains of one fan-tail.[2] These settled birds define the two supports as of a religious nature, and carry with them the conclusion that the swinging figure[3] was *ipso facto* possessed by the spirit of the divinity. The archetype would clearly be the Goddess herself enjoying the same pastime.

Swinging as magical and religious rite.

Swinging, practised as a magical and eventually a religious rite, is known the world over.[4] Various objects for this exercise are cited—swinging high might produce high crops, demons could be driven from the air, or the inspiration of spirits drawn from it.

Aiora festival at Athens.

The Attic feast of the Aiora celebrated the ripening of the grapes, and it is noteworthy that Ikaros the eponymus of the Deme Ikarià, to whom, with his daughter Erigonê 'Child of the Spring', its origins were ascribed, represents the pre-Hellenic, or in other words, the Minoan, element in the population.[5] This swinging ceremony is further connected with the Anthesteria[6]—the 'All Souls' feast of Ancient Greece. On vases,[7] where Satyrs are seen swinging a Nymph, there appears a large open rim below, like that of a large jar, such as those from which, as is shown on a lekythos, the little ghosts or *Keres* fly out.[8]

Swinging in modern Greece and Crete.

In Modern Greece and in Crete itself the ceremonial swinging of girls takes place on the occasion of various festivals including Easter and St. George's day.[9]

To the Minoans, familiar with the representations of divinities descending from on high with streaming locks, the act of swinging in the air may

[1] *P. of M.*, i, p. 440, Fig. 317.

[2] Paribeni, *op. cit.*, p. 747, has also, independently, recognized the birds as doves and cites the corroborative opinion of Dr. Della Seta.

[3] Unfortunately the head of the figure is wanting and we cannot therefore tell whether it was surmounted by a tiara or any special sign of religious dignity. It seems best to assume that we have here a votary. The dress with the large apron in front is clearly related to that represented on the faïence figures from the Temple Repositories.

[4] Frazer, *The Dying God* (*Golden Bough*, Pt. III, referred to in the Index as vol. iv), p. 277 seqq., *Swinging as a Magical Rite.*

[5] Erigonê also appears as daughter of Aigisthos and Klytemnestra, *Etym. M.*, p. 42.

[6] See especially M. P. Nilsson, *Die Anthesterien und die Aiora*, in *Eranos*, xv, 1915, p. 30 seqq. (*Acta Philologica Suecana*: Göteborg). See, too, Hunziker, Art. 'Aiora' in Daremberg et Saglio, *Dict. des Antiquités.*

[7] *Griechische Vasenmalerei* (Furtw.-Reich., Fr. Hauser's continuation), Pl. 125, Text, p. 29. A *hydria* in Berlin Mus., *op. cit.*, p. 28, Figure; Furtw. no. 2394, one Nymph swings another.

[8] *Gr. Vasenmalerei* (*loc. cit.*, p. 29, Fig. 12). In the Jena Museum.

[9] Instances relating to the Morea (Koukoura in Elis), Seriphos, and Karpathos are given by Frazer, *op. cit.*, pp. 283, 284.

itself have had a celestial association and might be thought to bring with it the 'afflatus' of spiritual possession.

Whether the Goddess herself is to be recognized in the swinging figure before us or, as seems more probable, her votary, it is clear that she could be envisaged as herself taking delight in this airy pastime.

Might she not equally be regarded as taking part in the acrobatic feats of the arena? No impersonation of her under this aspect indeed had been hitherto brought to light. In any case it stands to reason that for such a function it would have been necessary for her to assume a special garb.

Normal Impersonations of the Goddess in Fashionable Dress.

Normal impersonations of Goddess in fashionable dress.

Apart from the early version of the Cretan Goddess as mother-naked—inherited from Neolithic times and never, as we shall see, wholly discarded—from the beginning of the Middle Minoan Age onwards, whether in her plastic or her pictorial shape, she is consistently presented to us as following the latest styles in dress. Even the more or less cylindrical form of the lower part of the images found in her rustic shrines of the beginning of the Late Minoan Age as explored at Gournià and Prinià can be shown to be really an outgrowth of the bell-shaped skirts that were in vogue in M. M. I and II. On the other hand, the splendidly executed figurines of ivory or faïence from palatial shrines display in their elaborate details every item in the fashionable dress of the Court ladies of the transitional M. M. III—L. M. I Epoch. They are seen wearing flounced skirts, shorter according to the current usage in the earlier part of that epoch, longer as a rule in the later phase and the succeeding Late Minoan Periods. Above the belt is a close-fitting, short-sleeved bodice supporting the full breasts.

So, too, among the many known[1] impersonations of the Goddess, as seen on signet-rings and bead-seals, whatever her activities may be, she has regularly made her appearance decked out thus in the fashionable dress of contemporary female society. Her robes are as stylish when she hunts the stag or shoulders a wild-goat, as when she is receiving the adoration of her votaries. In a similar guise she is seen descending from her celestial abode, and so, too, when, assisted by a courtly attendant in her resurgence from the Underworld, she emerges from the bosom of the earth as Goddess of Spring, we see her already flounced and corseted.

It is abundantly evident that the Goddess stood in a peculiarly intimate relation to the sports of the arena, beside which, as we have seen, her

[1] It will be seen that an exception must be made in favour of what seems to be a figure of a female divinity purely nude on the remarkable gold signet-ring described below. (See concluding Section.)

Unfitted for sports.

columnar Shrine was set up. In view of the agility displayed by her in the hunting field and apparent delight in high swinging, it might well indeed be thought by her worshippers that, in some diviner sphere, she had herself supplied an example of superhuman prowess as a taureador. It is clear, however, that the flounced attire which the Minoan artists had somehow reconciled with her other activities, was wholly incompatible with acrobatic feats.

Emergence of Chryselephantine Image of Goddess in Garb resembling Taureador's.

New chryselephantine image of Goddess in garb resembling taureador's.

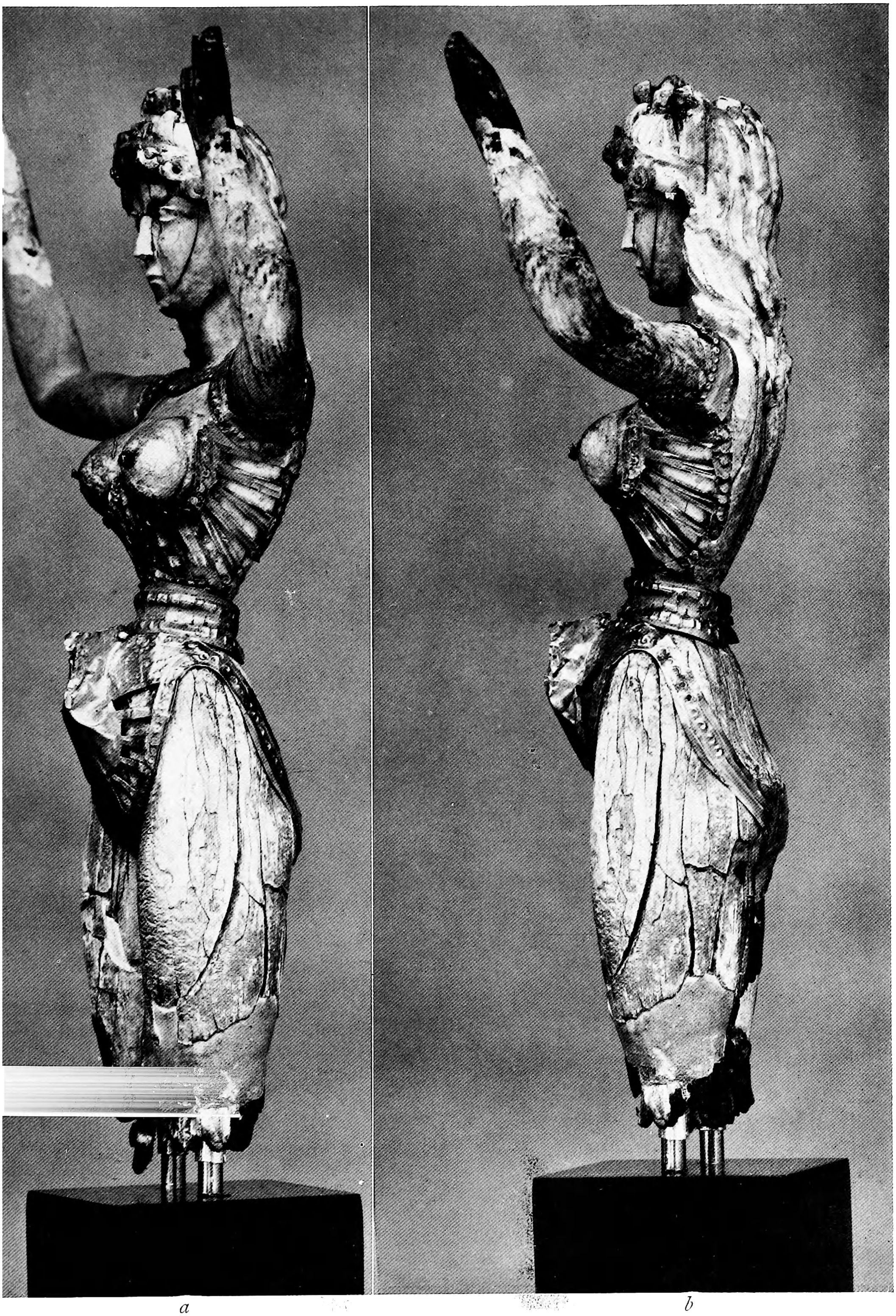
A remarkable chryselephantine image that has now seen the light (Figs. 14, 15, and Frontispiece, Coloured Plate XXVII) seems to show that in this case, at least, her cumbrous robes were discarded and that the Goddess herself was very nearly assimilated to the guise, ceremonially assumed, of the girl taureadors who performed in her honour travestied as youths.

This figure may be regarded as representing the third Epiphany of members of a divine group standing certainly in the closest relation to those of the 'Ivory Deposit' in the 'Domestic Quarter' of the Knossian Palace. The 'Boston Goddess' in her original fragmentary state was actually seen at Candia some twelve years after the discovery referred to. The ivory boy-God that it was possible to illustrate in the last Volume of this work, was 'released' at Paris after about an equal interval of time. The third figure has made its appearance only quite recently in a still more distant trans-Atlantic site. It is now—as the result of the well-known enterprise of its Director, Mr. C. T. Currelly—in the Toronto Museum, and it is owing to his kindness and liberality that it has been possible for me to give a full account of it in this place.[1] All that its recent guardians had been able to ascertain about the image was that it had made its way from Crete, where it had been in private possession for a considerable number of years.

This, though still not the last of these emergent forms,[2] is certainly the most surprising. It presents the greater part of a female figure of which, however, the legs from the knees downwards and the right arm, except the hand, are wanting (Figs. 14, *a*, *b*, and 15). The extreme height of the part preserved was 17·8 centimetres or about 7 inches. From the photographic record of the remains as originally found, reproduced in Suppl. Pl. XLIII, it will be seen that, with the above exceptions, both the ivory core of the image and the gold plating with which it was so richly overlaid were remarkably well preserved, though the 'Minoan sheath' had become

[1] For a preliminary notice by me, see *Illustrated London News*, July 25, 1931.

[2] For another chryselephantine figure of a boy-God, see below, Section 104.



a *b*

FIG. 14. IVORY FIGURE OF MINOAN GODDESS AS 'LADY OF THE SPORTS' WITH DRESS AND

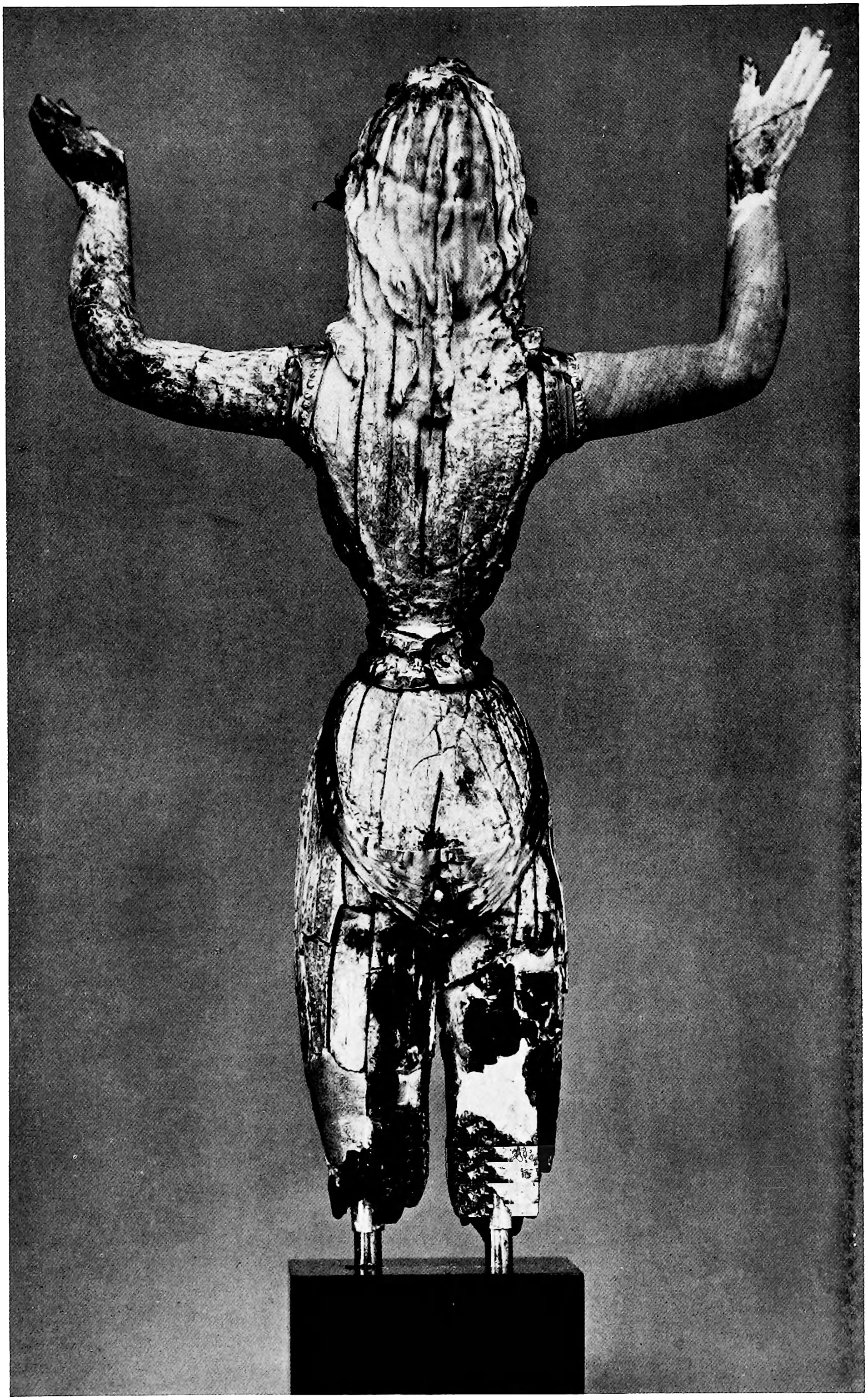


FIG. 15. BACK OF CHRYSELEPHANTINE FIGURE OF THE MINOAN GODDESS.

detached, as shown in Suppl. Pl. XLIII. The plating was fastened by small gold pins or rivets.. Its magnificent effect as restored with both hands uplifted will be best realized from the Coloured Frontispiece to this Volume.

Restored reproduction.

As will be seen by a comparison of Figs. 14, 15 depicting the figurine in its present condition, very little has been required in the way of restoration beyond the filling in of some cracks and the symmetrical replacement of the right arm below the hand in conformity with that on the left, preserved, with its articulation. This consists of a square-cut tenon, a centimetre long and about 0·4 cm. in diameter, fitting into a mortise-hole with a lining of metal, apparently silver. This arrangement exactly answers to that of the taureadors of the 'Ivory Deposit' at Knossos, though it does not appear that in that case there was a metal lining within the mortise-holes. The length of the arms when complete was 9 centimetres (*c.* $3\frac{1}{2}$ inches), as extended, very closely corresponding with those of the 'Leaping Youth'. Otherwise their action, in the latter case, stretched forward to their utmost extent, contrasts with the bent position of the arms of the present statuette.

The female personage before us at once strikes the eye as of a very different character from that of the girl performers in the Minoan bull-sports as portrayed for us in the frescoes and small reliefs, notwithstanding the fact that she shares with them the male loin-attire that is the most distinctive article of her apparel.

Matronly corset combined with male loin attire.

These performers—whether they display their acrobatic skill in the Palace Circus or the open field—are consistently depicted with a very slight pectoral development, so much so that in the wall-paintings, were it not for the convention of the white skin colouring, it might be difficult to distinguish them from the youthful male taureadors who take part in the same scenes.[1] But the figure before us presents the full breasts of a very matronly stage and their decidedly prominent contours have brought with them as a corollary the need for artificial support. This is supplied by the stays, of which we find the indication about them in open gold work, somewhat suggestive of the whalebones of more recent feminine attire. As will be seen from Fig. 16, *a*, *b*,[2] and the back view, *c*, this corset has no visible continuation behind, though its two posterior borders may, however, in reality have been connected by some piece of stuff. It was suspended above from the shoulders, as we see, by means of two bands, that might be described as very short sleeves.

[1] The female character of the breasts are just distinguishable in the case of the performer seen in difficulties between the bull's horns on the Vapheio Cup A. She is otherwise characterized by her exceptionally elaborate *coiffure*. (See *P. of M.*, iii, p. 179, Fig. 123 A).

[2] From a sketch made for me by Mr. Gilbert Pratley.

Stays on the same principle are to be seen on the marble statuette of the Goddess in the Fitzwilliam Museum, Fig. 17, *a*, *b*,[1] and on the faïence figure of what should best be regarded as a double of the 'Snake

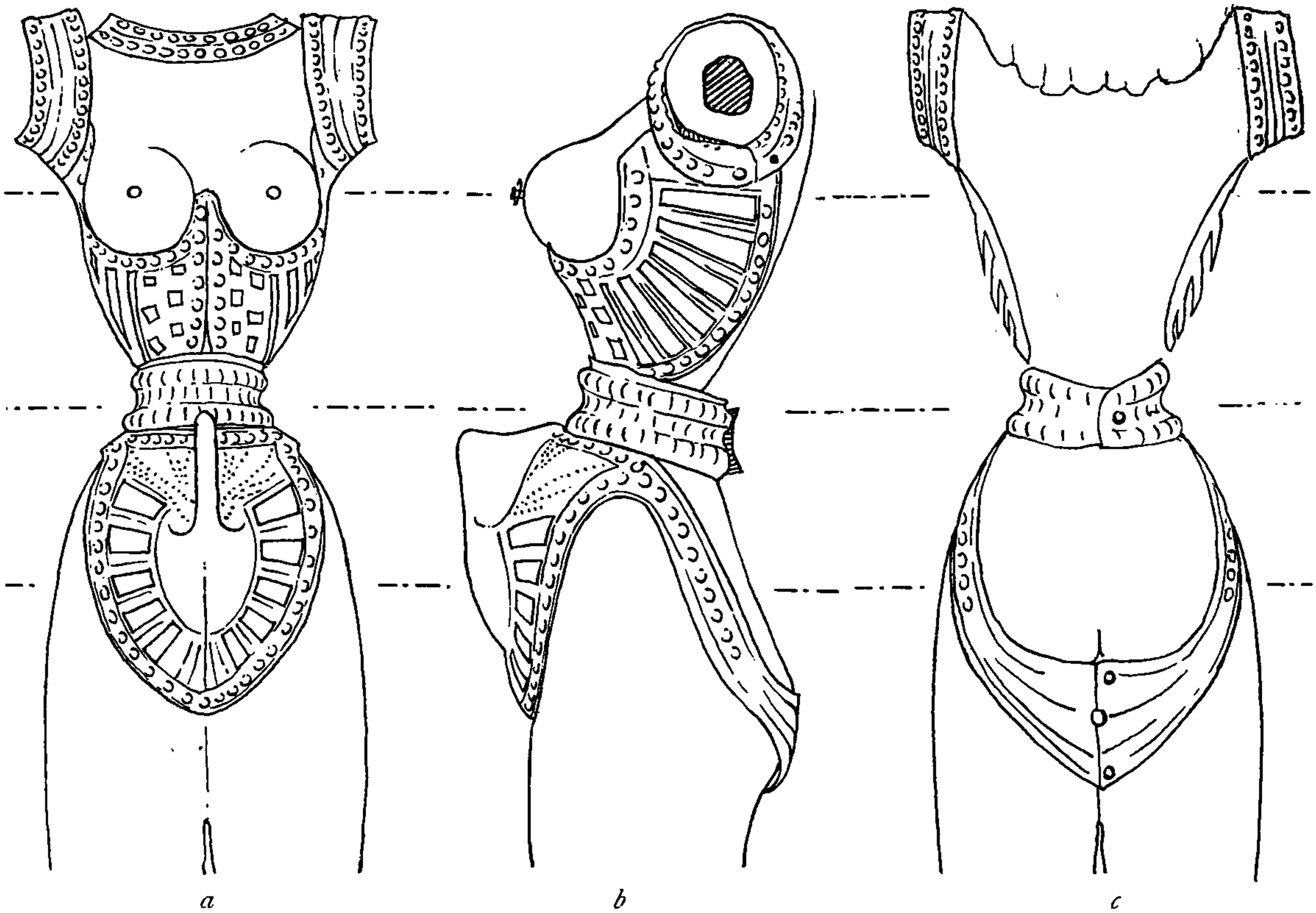


FIG. 16 *a*, *b*, *c*. VIEWS OF CORSET, GIRDLE, AND MALE LOIN ATTIRE OF FIGURINE IN GOLD PLATE.

Goddess', from the Temple Repositories at Knossos. In these cases the corset proper is part and parcel with a jacket, the sleeves of which extend some way down the upper arms. The two Knossian examples supply evidence of the lacing together of this bodice by means of looped knots. The Cambridge Goddess, on the other hand, has a knob in front (see Fig. 17, *a*), which Mr. Wace[2] ingeniously interprets as the head—set at right angles—of a metal pin that passed 'downwards, over and under the bands of braid' or some similar material. In the case of the chryselephantine image before us there is no certain clue to the means of fastening the corset, but the gold

[1] Reproduced from A. J. B. Wace, *A Cretan Statuette in the Fitzwilliam Museum*, &c. Pl. II, 2.

[2] *Op. cit.*, pp. 2, 3.

rivet by which its upper angle, between the breasts, is attached to the ivory, may mark the place of such a pin-head.

As in analogous cases, the lower border of the corset or bodice corresponds, so far as it is visible, with the upper border of the belt. The

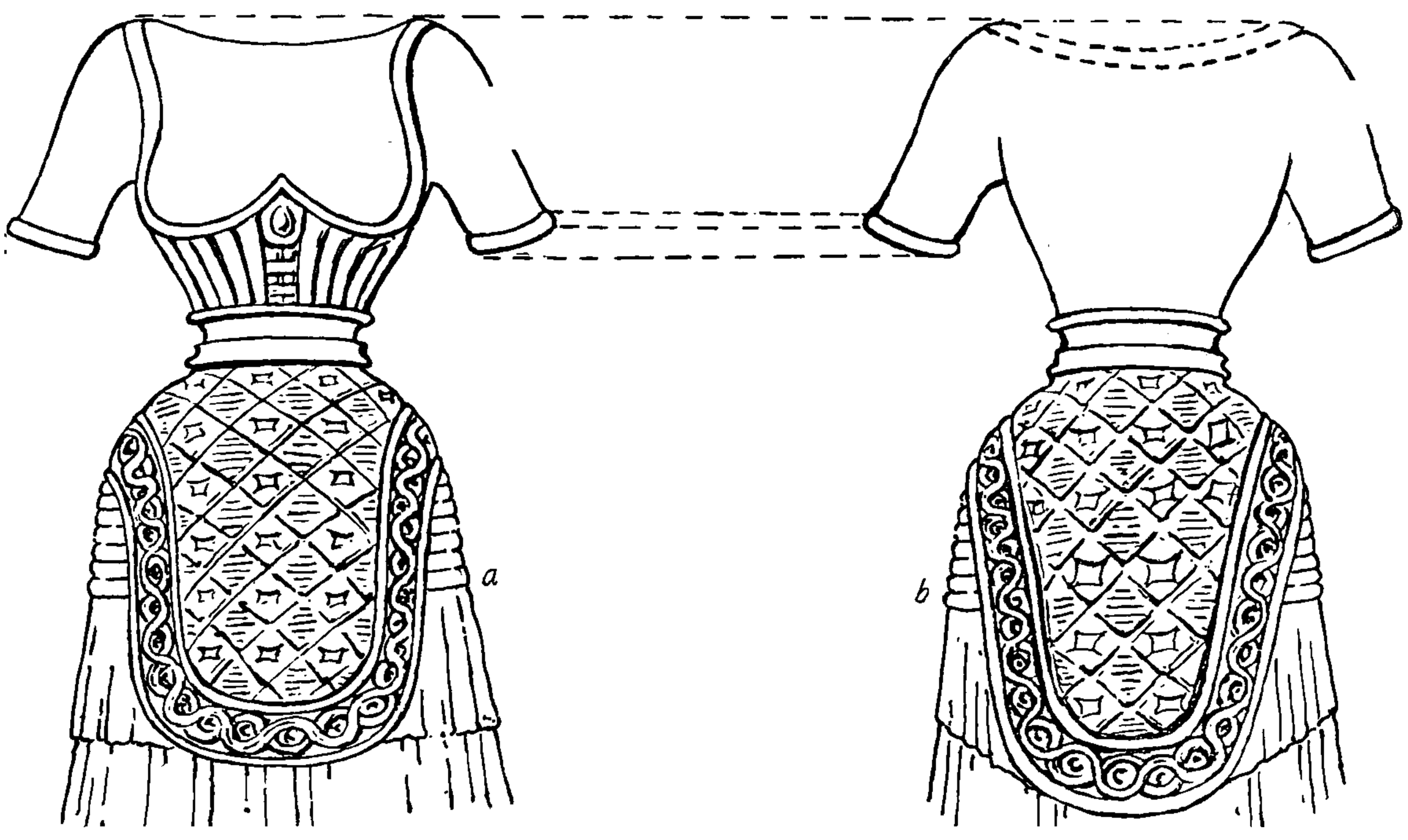


FIG. 17 *a*, *b*, *c*. CORSET AND 'APRON' OF 'FITZWILLIAM GODDESS'.

central band of the Minoan belt seems to have been of metal,[1] but each of the rolled upper and lower zones may well represent 'a padded cushion-like belt of some elastic material'.[2] The upper of these would have overlain the edge of the bodice, while the lower would have caught the upper edge of the skirt, or of the male loin-clothing.

It is this masculine arrangement that we see here adopted.

Like the corset above and the belt itself, this loin-clothing consists of a thin gold plate decorated with rows of punctuations and small embossed disks, and showing barred openwork analogous to that of the stays. Behind, as usual, is a tongue-shaped piece which should cover the upper part of the buttocks and narrows to a point below, where it was drawn between the legs. In the present instance the gold plating that represents this flap-like

[1] See *P. of M.*, iii, p. 448 (with note 3), and p. 449.

[2] J. L. Myres, *The Sanctuary-site of Petsofà; B. S. A.*, ix, pp. 364, 365.

section of the loin-cloth shows only the lower point and the borders, the central portion being wanting.

Masculine 'cod piece' attached.

In front, where in the original the cloth would have been drawn up between the legs, the corresponding section also narrows to a point below. It is on the centre of this that the 'cod-piece', the distinguishing feature of the Minoan male attire, is riveted on by small gold pins above.

Minoan adaptation of 'Libyan Sheath'.

It will be seen from the examples of this article of apparel given in Fig. 12, above, as worn by both the ordinary Minoan men and by the female taureadors, that it exactly corresponds with them. The usage finds a parallel—as already shown [1] — in the 'Libyan Sheath' or 'penistasche', still extant in parts of Nigeria, and the strong proto-Libyan element discernible in the early culture of the Southern-most Cretan region may help to explain the African analogy.

FIG. 18. PROFILE VIEW OF HEAD AND BUST OF CHRYSELEPHANTINE STATUETTE. (*c.* $\frac{2}{1}$.)

Facial Features and Head-gear.

Facial features of figurine.

The facial features of the figure are very clear cut, as will be seen from the enlarged profile view given in Fig. 18. The chin is well defined, the lips, which are decidedly narrow, are arched upwards, the rather long nose has a faint tendency to aquilinity, contrasting thus with the 'tip-tilted' profile of that of the 'Boston Goddess', and approaching nearer, indeed,

[1] *P. of M.*, ii, Pt. I, pp. 34, 35, and Suppl. Pl. XIII. Cf., too, p. 25, Fig. 9, *a*.

to the Classical outline of that of the Cambridge statuette[1]. The eye-lids are sharply defined but without the refinement noticeable in those of the Boston figurine, neither is there here any indication of the pupils.

FIG. 19. BACK VIEW OF HEAD OF NEWLY 'EMERGED' CHRYSELEPHANTINE FIGURINE.

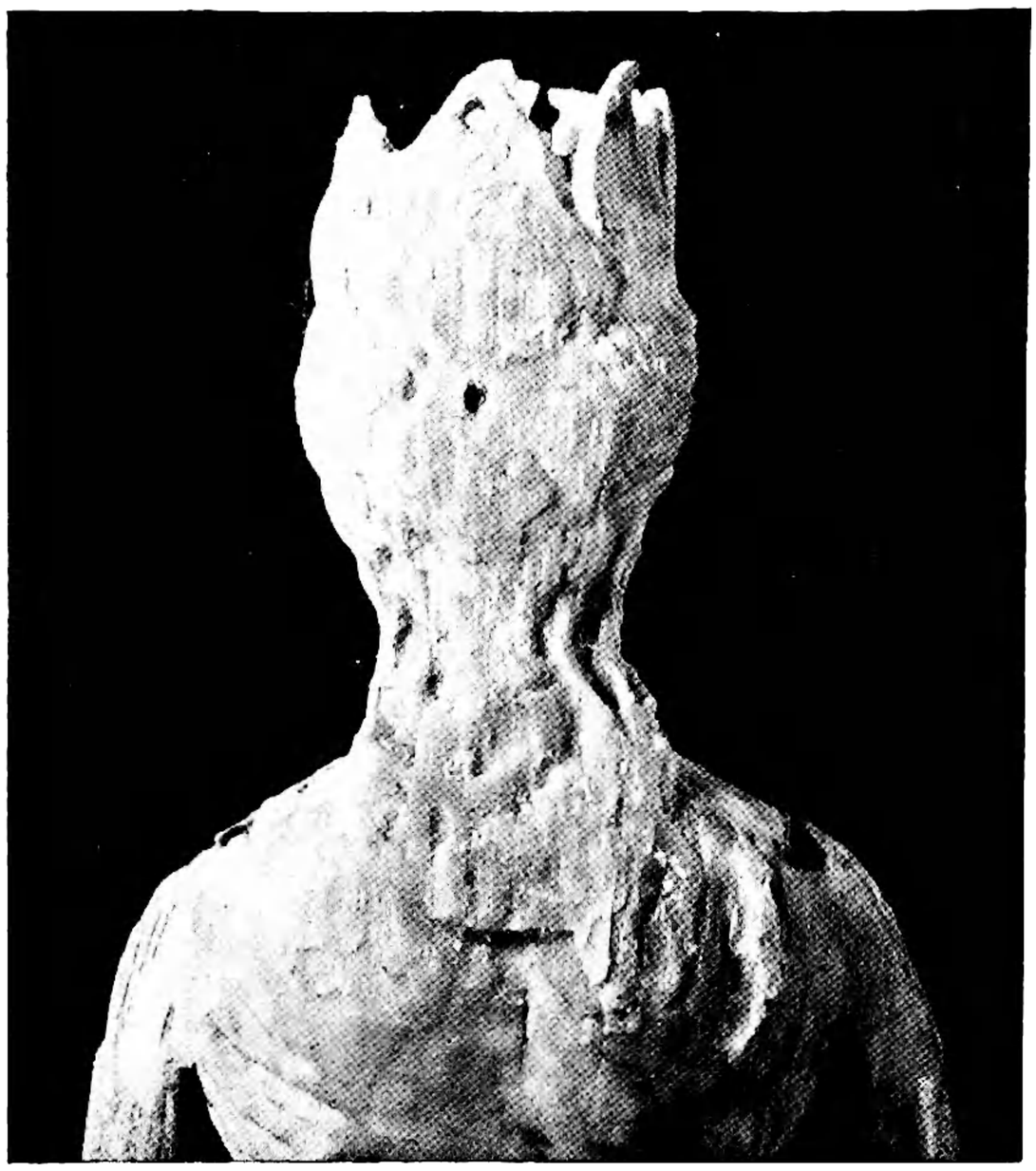


FIG. 20. BACK VIEW OF HEAD OF 'BOSTON GODDESS'.

A slight asymmetry is perceptable in the setting of the orbits, the outer corner of the left eye-lid being slightly drawn down.

New Stone Statuette resembling 'Cambridge Goddess' with Similar Features.

The comparison suggested by the Classical profile of the chryselephantine figure with that of the statuette of the tiara'd Goddess in the Fitzwilliam Museum has now received a remarkable illustration.

After an even longer period of seclusion than that of the latter, there have recently emerged two additional statuettes, of limestone with fine crystalline veins, and clearly by the same hand—in these cases cut out of single blocks—from a Cretan source. It may be further legitimately inferred that they were derived from the same sanctuary deposit as the first, locally

[1] See Vol. ii, Pt. I, pp. 235–7, and Fig. 133.

believed to have been within the area occupied by the Harbour Town of Knossos.[1]

Of these works, which, thanks to the kindness of their owners, it has been possible to publish for the first time in this Volume, one, representing the Snake Goddess, is fully described and illustrated in Section 95, Pt. II below. The other, here reproduced in profile in Fig. 21, with front and back views in Suppl. Pl. XLIV, is in many respects a replica, on a scale one-third larger,[2] of the Cambridge specimen. The Goddess wears an identical tiara, while the dress, including the ribbed stays and an apron with a diaper pattern, is substantially the same. Here, too, we see the same clear-cut nose and regular profile. In the former case, however, the Goddess lays her hands on her matronly breasts: here they rest on the sides of her 'apron'.

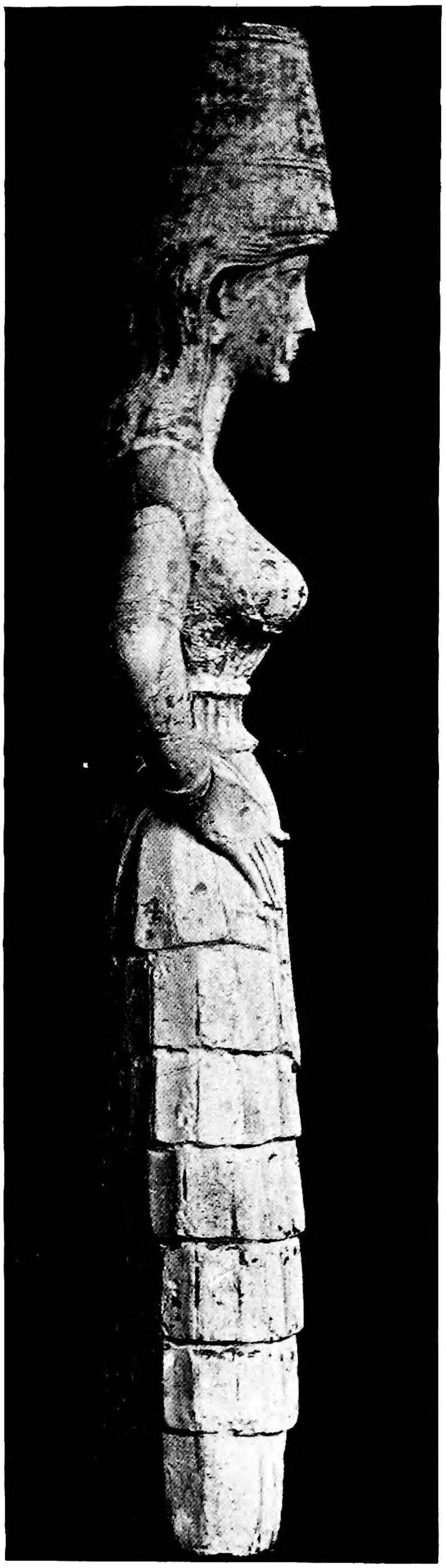


FIG. 21. STONE FIGURE OF TIARA'D GODDESS. (SEE SUPPL. PL. XLIV), HEIGHT 36 CM.

Diadem and Jewellery of Chryselephantine Figure (Goddess of Sports).

Diadem and coronal.

In the case of the chryselephantine Goddess, a diadem of gold plate is drawn above the forehead in place of the usual fringe of curls, the lower border of which shows a curved decoration imitating these. Though broken off at the sides, the place of the gold band behind is marked by a distinct groove in the ivory. Above the diadem the hair is rolled up and drawn in above to another groove, encircling the head, which was clearly meant for the attachment of some further gold ornament. Above this again rises a kind of top-knot. On the left side

[1] *P. of M.* ii, Pt. I, pp. 235, 236.

[2] The height of the Fitzwilliam statuette is 22·7 cm., that of the figure now described is 36 cm.

of this there are traceable the bases of what seem to have been rivet-holes for some ornament. Might there have been some kind of rayed crown such as we see on Minoan Sphinxes?

Across the front of the neck, attached by three rivets, appears a broad gold plate, showing two rows of embossed disks, that may be interpreted as a double necklace the continuation of which would have been concealed behind by the flowing locks. Its exceptional size may be taken as a sign of special distinction, like the lily-collar that adorns the relief of the 'Priest-king' or that of the 'Young Prince' on the steatite cup. Broad necklace: sign of rank.

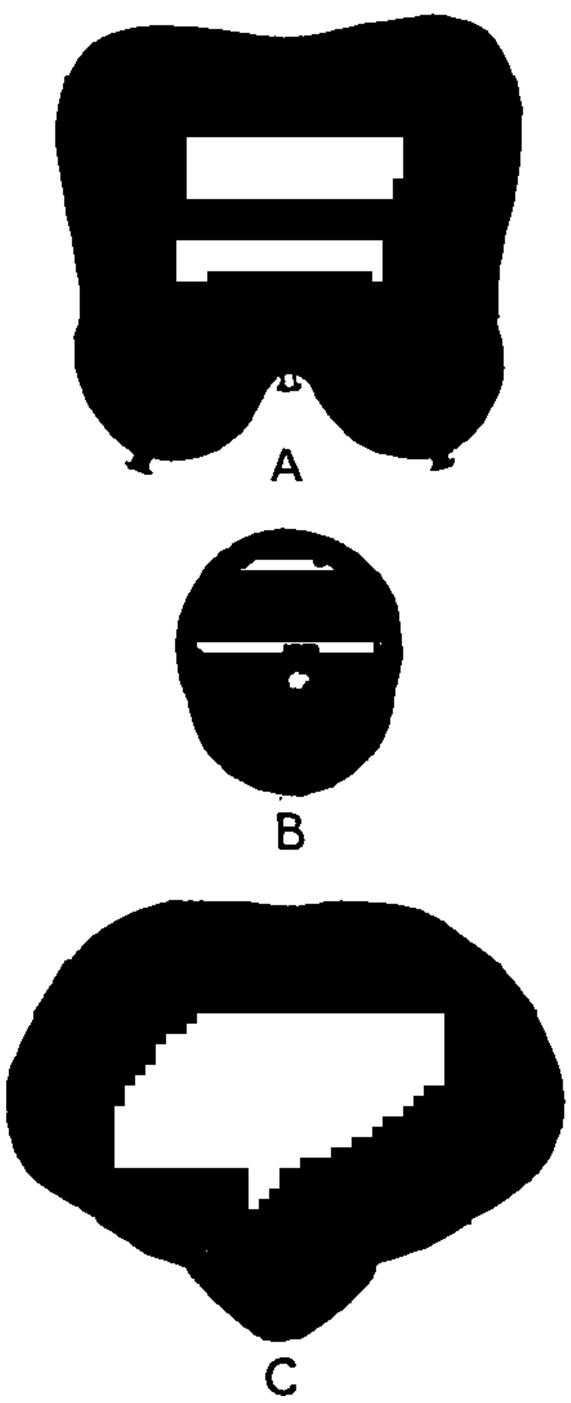


FIG. 22. SECTIONS ACROSS CHRYSELEPHANTINE FIGURE.

Locks of hair fall down on either side of the head and descend down the back in luxuriant tresses to below the level of the shoulders. The 'undulated' flow of these recalls that of the 'Boston Goddess' (see Figs. 19, 20), as also of the boy-God, and may be legitimately regarded as a mark of the same Knossian School.[1] Like these examples, moreover, it is distinguished by the delicate rendering of the small of the back.

General Proportions of Chryselephantine Figure.

The full height of this statuette when complete would have been as nearly as possible 23 centimetres, or about $9\frac{1}{10}$ inches.[2] Height and girth of figure.

As in the case of the figurines described in the last Volume—the boy-God namely[3] and the bronze statuette of a youthful male adorant[4]—careful sections are here given across at the level of the breasts, the waist, and the buttocks (Fig. 22, A, B, C.). The parts at which these sections are taken are shown in Fig. 16 above.

The girth round the breasts, as seen in Fig. 22, A, is 11 centimetres and about 10 cm. as taken under the armpits. At the waist (over the

[1] The locks of the Cambridge statuette terminate in a more regular manner, but this again is characterized by the same delicate modelling of the back below.

[2] As preserved to the level of the knee the height of the object is 17 cm., and about 6 cm. more must be allowed for the lower part of the legs.

[3] The sections of this are given in *P. of M.*, iii, p. 448, Fig. 312.

[4] For the sections of this see *ibid.*, p. 460, Fig. 321.

girdle) B, it is 5·6 cm., or about 5 cm. beneath it, the outline being somewhat oval. C, round the thighs, is 11 cm. at the point shown in Fig. 16, and 11·8 cm. in the greatest girth.

Comparison with adult male figures.

The adult bronze figure of the male sex referred to was about 25 centimetres, or 10 inches, in height, and therefore supplies an approximate standard of comparison. In that case the girth under the armpits[1] was about 10 centimetres, as in the case of the chryselephantine female statuette. The girth round the waist, following the hollow of the girdle, was 7·3 cm., or 1·7 cm.—over a third—greater. Round the buttocks the maximum girth of the male figure was 14·4 centimetres, or 2·6 cm. more than in the case of the opposite sex, a tribute to the muscular development of Minoan athletes. Even in the breadth at the hips the male figure very nearly approached the female, 4·3 centimetres as against 4·7.

The measurements of the 'Leaping Youth', as adapted to a standing position, from the crown of the head to the heel work out to 25·6 centimetres, closely corresponding to the height of the bronze male figure. This, allowing for a reduction of $\frac{1}{12}$, according to the normal proportions of the two sexes, would answer to a female figure approximately 23·5 cm., a stature practically identical with that attributed to our little chryselephantine image when complete.

This correspondence has certainly a very significant bearing on the source of this remarkable relic, which, after long years of furtive seclusion, has, like the others, referred to above, so surprisingly emerged to the light of day. Whether or not it had belonged to the same 'Deposit of Ivories', there can be little doubt that it was executed in the same palatial workshop.

Comparison with 'Boston Goddess'.

Though the 'Boston Goddess' is on a somewhat smaller scale, points of resemblance in style and fabric are also to be observed in that case, equally suggestive of a common and contemporary origin. In addition to the naturalistic treatment of the falling tresses and the delicate modelling of the back, already noted, the similar conformation of the very prominent breasts, and the same indication of the nipples by the heads of gold pins at once strike the eye. Among decorative parallels may be noticed, too, the embossed disks arranged in two rows on the gold plates of the Goddess's lowest flounce, as on the collar described above.[2]

Little doubt can be entertained that in the present case, too, we have

[1] For the sections of this see *P. of M.*, iii, p. 460, Fig. 321.

[2] The plates of other flounces of the Boston figurine are adorned with the 'wave and dot' motive, shown below to be the peculiar property of the 'Snake Goddess' and, in fact her sacred 'Adder Mark'. See below, p. 181 seqq.

to do with a personage of a divine nature. Although we have not here the evidence of a high tiara such as we see on the head of the Boston Goddess and of the boy-God, the significance of the broad gold diadem and of the traces of some kind of coronal is sufficiently clear. Equally significant is the profusion of gold-work decoration visible in this figure, which is itself much greater than could have been the case with the other examples cited.

In the loin-clothing, where this wealth in gold plating is most conspicuous, we recognize, indeed, an assimilation with the male costume that the girl performers in the sports had borrowed from the Minoan 'cowboys' and taureadors. But the transition to true femininity is here marked by the elaborate stays and *corsage*, as well as by the full womanly development of the bosom.

'Our Lady of the Sports' still a Mother Goddess to her Protégés of the Bull-ring.

'Lady of the Sports' still Mother Goddess.

We have here 'Our Lady of the Sports', but it is still the Mother Goddess in one of her numerous impersonations. Her matronly proportions themselves agree with those of the faïence and ivory figurines where she appears holding the snakes of the Underworld. In this motherly aspect, she still forms a subject of natural appeal to her adoptive children of the Arena, with whose fortunes she is so closely linked in her novel impersonation.

Her aid constantly invoked by her protégés of Bull-ring.

It was not enough that her pillar-shrine should overlook the Palace arena. The Minoan bull-sports, as practised either there or in the rock-fringed glens of the country beyond, might well be thought to call at every turn for the personal intervention of the Goddess. For it was in truth a dangerous profession. On the frescoes and reliefs we watch the performer launched in mid-air from a vantage-coign to gain a stranglehold of the coursing animal, or, failing that, entangled between its horns and whirled round with monstrous force; we see him depicted taking a back somersault from the bull's hind-quarters in the uncertain hope that an attendant at the side may break his fall, while, in more than one instance, he is badly thrown or tossed and lies half dazed on the field, to be gored or trampled on. There was constant need for those connected with these dangerous acrobatic feats to invoke the aid of a divine patroness, who, as in the image before us, thus combined with her sporting garb the essential attributes of motherhood.

A vision of comfort in direst need.

The attitude in which the figure itself stood, when the legs were complete, with both hands raised and the palms turned forward, is not an attitude of the bull-ring. It should not be confused with that of the girl performer in the 'Taureador Fresco stretching her hands forward to

catch the youth who executes a somersault over the coursing bull's back.[1] It is simply the traditional posture of the rustic clay images of the Goddess in the primitive house sanctuaries of Crete such as that of Gournià—a posture still adhered to by the latest of all such Minoan images, that namely seen within in the hut-urn of the 'Spring Sanctuary' of Knossos.[2] It is as if the Goddess with her raised palms both received the adoration of her votaries and gave back her benediction. The little gold and ivory image, restored once more to the light of day, is that of a Goddess, always still a Mother, but who, it may be in some more celestial scene, herself had shared the most risky turns of the sport. We have here, in fact, a record of some such glittering vision as had comforted of old the strained eyes of her followers in the moment of their direst need.

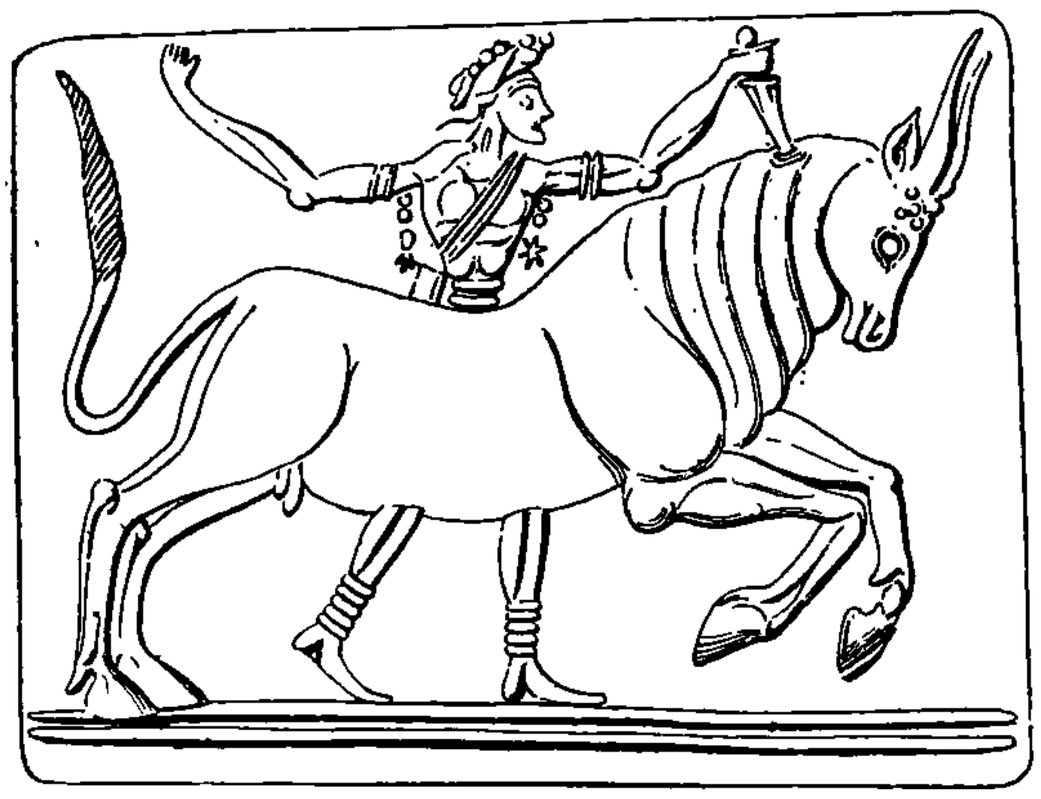


FIG. 23 RITUAL SACRIFICE OF BULL OF ARENA; FROM GOLD BEAD-SEAL, THISBÊ.

Ritual Sacrifice of Bull of Corrida.

Sacrifice of bull of *Corrida* on Thisbê seal-type.

That there was a certain ritual element in the bull-sports of the arena may be gathered from a remarkable episode illustrated by one of the gold bead-seals from Thisbê, here reproduced in Fig. 23.[3] In this case, indeed, we seem to have evidence of an actual sacrifice at the end of the *Corrida*.

In this unique representation a youthful personage appears behind the bull, distinguished by a wreath round his head, above which is seen a beaded *bandeau* that falls down on both sides behind his shoulders, and terminates in two pendants in the form of stars that doubtless had a symbolic significance. Round his left shoulder, as it appears in the original, hangs a sword-strap, from the sheath appended to which he has drawn a short sword or dagger and, advancing from the side, drives it into the beast's neck between the cervical vertebrae. The bull itself, as if wearied with continual coursing, is seen proceeding at a kind of broken trot, very different from the flying gallop usual in these circus scenes.

Priestly *Matador*.

In this Minoan *matador* we may venture to discern a priest of the

[1] *P. of M.*, iii, p. 213, Fig. 144.
[2] *Ib.* ii, Pt. I, p. 129, Fig. 63.
[3] See, too. *ib.*, iii, pp. 225, 226, and Fig. 160 (from a drawing), and my *Ring of Nestor*, pp. 7, 8, and Fig. 6.

Goddess in her character of Lady of the Arena. He wears apparently the usual loin-clothing and puttees, and the two rings encircle his upper arms.

FIG. 24. CORNELIAN LENTOID FROM MYCENAE SHOWING SACRIFICED BULL ON TABLE.

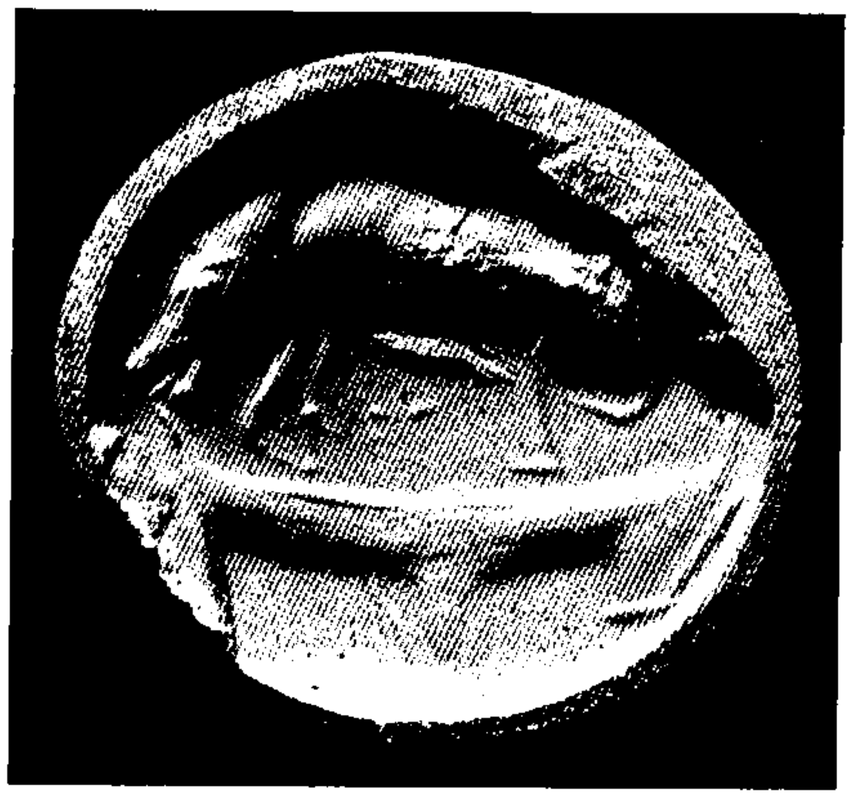


FIG. 25. BANDED AGATE LENTOID FROM NEAR ARKHANES.

An interesting pendant to this design is to be found on a lentoid bead-seal of banded agate,[1] the comparatively advanced Late Minoan character of which is evidenced by the conventionally arranged foliage of a bent palm-tree visible in the upper field (Fig. 24). Here the slaughtered bull, with the dagger stuck as before into the back of its neck, appears, with protruding tongue and his legs bent under him, on what is clearly some kind of sacrificial table or altar. The thick board or slab on which the victim rests is supported by four substantial legs with narrow posts between them, the broader supports being of an architectural type better illustrated by a fresco of kindred design from Hagia Triada.[2]

Gem-types showing sacrificed bull on Table.

FIG. 26. GREEN STEATITE LENTOID: MUSEUM, CANDIA.

[1] From Mycenae: in the Berlin Museum (Montigny Coll.): Furtwängler, *Beschreibung der Geschnittenen Steine*, no. 22, and Pl. I, and *Antike Gemmen*, no. 22, and Pl. II. See, too, Imhoof Blumer und Otto Keller, *Tier- und Pflanzenbilder auf Münzen und Gemmen*, Pl. 17, 55, and p. 110. There the animal is taken for an antelope, owing to the upright direction of the horn that is visible. This view, however, was published in 1889 when the long array of Minoan bovine types was unknown. Furtwängler, writing in 1896, recognized its real character.

[2] See below, p. 43, and *P. of M.*, iii, p. 39, Fig. 24. The supports on the gem resemble *bucrania*, and have seemingly been assimilated to them by the engraver.

The Cretan source of this type is indicated by the occurrence of a cornelian bead-seal, defective above, but of a substantially identical type (Fig. 25) from the neighbourhood of the important Minoan settlement at Arkhanes,[1] a few miles inland from Knossos. In this case the horns curve characteristically forward, in contrast to the misleading upright direction of the other, which indeed had suggested the sabre-horned antelope of Central Africa.[2] Here, too, the tongue protrudes and the animal is depicted with crouched legs on a broad base with three supports, roughly suggestive of those in the other design. A fourth example, also Cretan, is supplied by a green steatite lentoid in the Museum at Candia, showing the sacrificed animal on a similar table (Fig. 26).[3] Beneath it appears a horned head, and—stuck, apparently, into its left support—what is possibly intended for the sacrificial dagger used, resembling that on the Thisbê seal (Fig. 23).

Sacrificed bull on table in Hagia Triada Fresco.

A variant of this subject occurs on a fresco of the Hagia Triada Sarcophagus, where a young bull with the head facing is seen bound up on a kind of thick table which has high legs turned in such a manner as to resemble columnar shafts with disproportionately high capitals. Their architectonic details, as already noted, help to explain the form of the supports seen in Figs. 24–6. The composition to which the table and victim belongs, a completed drawing of which is reproduced in Fig. 27, forms a complete ritual scene. Two goats, also intended as offerings, are crouched below the table; behind it appear a female votary, holding her hands downwards, and a youth playing the double flute.[4]

Of the sacrificed animal itself an essential feature is the blood pouring down from the mortal wound—which we know to be in the back of the neck—into a libation vessel below. The recipient of this shows the same outline and banded decoration as that used in the companion scene to pour the blood of the victims into a larger vessel, supported between two-stepped stands of the sacred Double Axes. Upon these are settled the bird messengers of heaven that indicate the divine possession.

In the scene with which we are immediately concerned another female

[1] Acquired with some other gems from that locality by a dealer in Athens, in company with unquestionably Cretan types.

[2] *Oryx leucoryx*; identified with this by Otto Keller in *Tier und Pflanzenbilder*, *loc. cit.*

[3] This bead-seal has been published by Nilsson, *Minoan-Mycenaean Religion*, p. 195, Fig. 62 and Pl. I, 6. He rightly insists on the fact that the sacrificial instrument was a dagger and not an axe. If the suggestion that the object beneath the table on the Candia gem was a dagger is right, it affords a new corroboration to the character of the instrument used.

[4] See on this *P. of M.*, iii, p. 39 where a further illustration of this part of the scene is given in Fig. 24.

votary stands in front of the sacrificial table, clad below the girdle in the skin of a victim, and with her hands lowered above what seems to be a small bowl laid on an altar. A two-handled vessel or basket with fruit—a hint of another kind of offerings—is seen above, as well as a high-spouted ewer,

FIG. 27. FRESCO PANEL ON HAGIA TRIADA SARCOPHAGUS WITH DESIGN IN PARTS COMPLETED.

while to the extreme right is a part of a small walled enclosure—here doubtless a sepulchral 'temenos'—with 'horns of consecration' above its cornice and, within, a sacred olive-tree. In front of what we may suppose to have been the entrance to the 'temenos' there again rises the shaft of a Double Axe, with reduplicated edges, upon which is perched the symbolic bird.

Funereal sacrifice of bulls.

We have here unquestionable evidence of the sacrifice of animals of bovine species, probably young bulls, in a funereal ritual in honour of some Minoan prince, but, as the Double Axes show, under the higher sanction of the great Minoan Goddess. We recognize here indeed the same religious conception that recurs at Knossos in the Tomb of the Double Axes, within which—together with a bull's head 'rhyton' or libation vessel—the Double Axe symbols of the Goddess and, originally we may believe, her actual image, had been placed at the head of the rock-cut cavity where the departed warrior was laid. In a glorified form this divine guardianship of the departed

reappears in the remarkable Temple-Tomb of a Knossian Priest-king described in the last Section of Part II. The idea of the Great Mother presiding over the Underworld itself receives detailed illustration on the 'Ring of Nestor'.

Bulls of Funereal Sacrifice depicted as Coursing in Arena.

Offertory bulls depicted as coursing in arena.

But the painted designs on the Sarcophagus lead us a step further. Once more, as on the bead-seal, Fig. 23 above, we are brought into connexion with the sports of the Minoan bull-ring, to which the Goddess herself stood so near. On the other side of the Sarcophagus, corresponding to that from which the scene shown in Fig. 27 is excerpted, two male votaries in sacrificial skins, following one who bears a miniature ship, are seen carrying small figures of bulls such as in this case we should have expected to see trussed like the victim on the table. Instead of this they are depicted at full gallop, with upraised tails, as if taken over, without the context, from the Minoan *Corrida* (Fig. 28).[1] It is the scheme long familiarized to us by the Tiryns fresco (Fig. 29), repeated on the wall-paintings of Knossos and the small reliefs and seal-impressions, and well illustrated by the bronze figurine of the galloping bull. It recurs moreover in the case of the silver figure of a similar bull—without the acrobatic adjunct of the other—borne on a salver by a tributary of Keftiu in a wall-painting of the tomb of User-Amon[2] that may well have been of a sacral character. In other words, we have here a symbolic attitude taken over owing to religious motives. The bull of sacrifice, in fact, is a bull of the *arena*. The mortal stroke itself was in all probability that dealt, as shown on the Thisbê intaglio, by a Minoan *matador*, and we may suppose that the victim was trussed and first transported with the lethal blade still sticking in its cervical vertebrae. The appearance of these symbolic coursing figures of bulls in the hands of the votaries seems to point to a preliminary function of ceremonial sports, held in honour of the departed dignitary but under the higher auspices of the Minoan Goddess, whose shrine—at times adorned by her Double Axe emblems—looked down upon the course.

[1] Cf. *P. of M.*, ii, Pt. II, p. 650 (Figs. 414, 415, from which Figs. 28, 29 are taken), and note. The identity of type with the coursing bulls of scenes of the arena had already been noted by Dr. R. Paribeni, *Il Sarcophago dipinto di Hagia Triada*, *Mon. Ant.*, 1908, Pl. I, and p. 28, Fig. 7, but the religious reason for this offertory form had escaped him.

[2] See *P. of M.*, ii, Pt. II, pp. 648, 649, Fig. 413*a*, and p. 738, Fig. 471.

Survivals of Minoan Bull-sports: Taurokathapsia of Thessaly and Artemis Tauropolos.

Survivals of Minoan Bull-sports: Thessalian *taurokathapsia.*

Was there, it may be asked, any surviving trace in the later Religion of Greece of the Minoan Goddess under her special aspect as patroness of the bull-sports? As a national institution, except for the *taurokathapsia* of Thessaly—mostly a horseback performance — the sports themselves were no longer in being. But the view has already been put forward that the epithet 'Tauropolos' (*Ταυροπόλος*) frequently connected with Artemis[1]—who still preserved her Eteocretan name of Diktynna or Britomartis—is best explained by an original relation to these bull-hunting and bull-grappling shows. In the same way the alternative form, Taurobolos, might well refer to the capture by means of a lasso as illustrated on the Vapheio Cup B.[2]

FIG. 28. OFFERTORY FIGURE OF GALLOPING HEIFER: H. TRIADA SARCOPHAGUS.

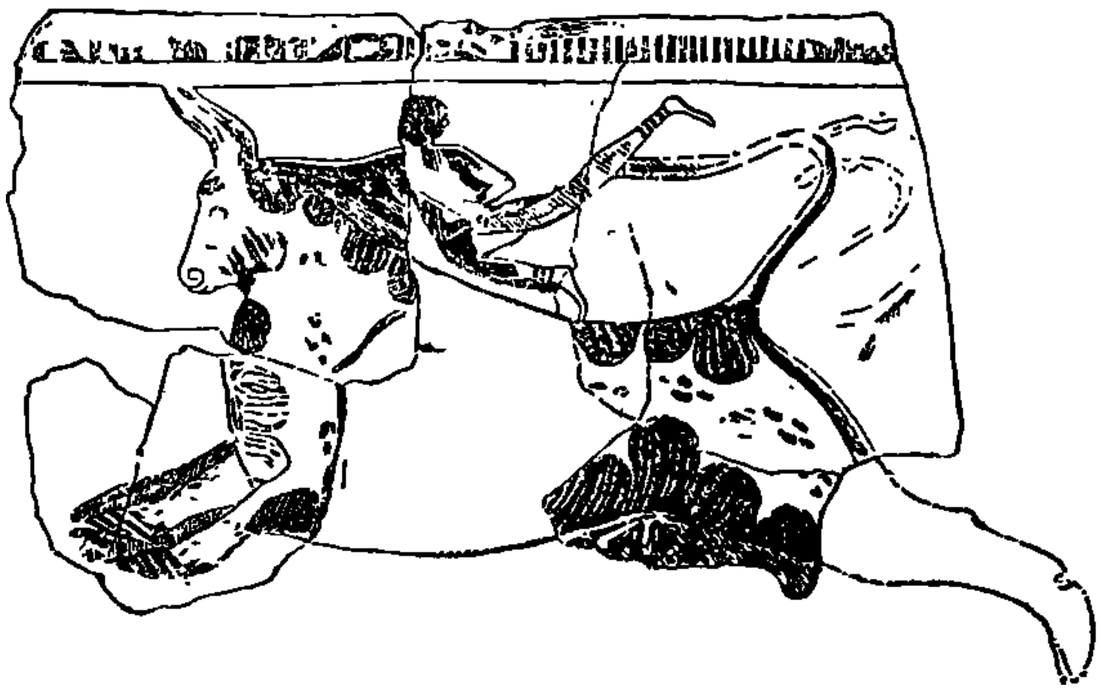


FIG. 29. GALLOPING BULL AND ACROBATIC FIGURE OF YOUTH: TIRYNS FRESCO.

Artemis Tauropolos or Taurobolos.

It was Artemis Tauropolos to whom the Chorus in the *Ajax* of Sophocles refers as a possible agent in striking him with the frenzy that led to his mad pursuit

[1] See especially the article *Tauropolos* in *Roscher's Lexikon* (V. 1) by the late Dr. O. Höfer. He translates the epithet as 'Stiertummelnde', and, if an English turn be given to the word, 'tumbling with bulls', we very nearly approach what may have been its original signification. The alternative epithet *Ταυροβόλος* generally applied to Athenê, but also occasionally to Artemis (e. g. Suidas, s. v.), suggests the parallel of *Ἐλαφηβόλος*. It is a suggestive fact that in the useful scheme of 'family tree' illustrating the pedigree of classical divinities from the original Minoan Mother Goddess given by Mr. E. J. Seltman (*B. S. A.*, xxvi, p. 96, note 3), three, Athena, Demeter, and Artemis—or, if we count Hera *βοῶπις*, four—are, as he points out, associated with the title of Tauropolos.

[2] *P. of M.*, iii, p. 183, Fig. 126.

of the herds of cattle.[1] Artemis Tauropolos repeatedly appears on Macedonian coins, often riding on a galloping bull with fillets hung from its head.[2]

As an inspirer of the 'wild hunt' of cattle in the case of Ajax, the Chorus does not forget that Artemis was the child of Zeus, and it is in the activities of male divinities and heroes that we may best hope to trace the direct tradition of the Minoan bull-ring in the religious sphere. Attention has already been called to the evidences of this tradition in the case of the bull-grappling feats of Heraklês and Theseus, and it must be remembered that towards the close of the Minoan Age there was a distinct tendency to bring into superior prominence the male Consort of the Goddess, hitherto relegated to a secondary place or represented by her young son. The widespread occurrence of little bronze figures of a warrior God, copied from those of the Syrian Lightning-God Resheph,[3] amply illustrate this tendency. The further equation of these with versions of his Hittite equivalent Teshub, whose axe answers to a worldwide symbol of thunder, brings the character of the religious transformation still nearer. The male side of the Minoan Goddess of the Double Axe had in fact never lost its hold in her Anatolian homeland, and is perpetuated by the abiding cult of the Zeus of Labranda and of Dolichê to the latest Classical Age.

Survival of Minoan Bull-sports as Religious Function at Miletos: Bull-sacrifice at the 'Boegia'.

Survival of Minoan Bull-sports as Religious function at Miletos—an old Cretan foundation.

It is quite fitting then that it should be in connexion with the old Carian element—so closely allied to a very early stratum in the Cretan population—and in the city, said itself to be of old Cretan foundation, that we find the best evidence of the survival of the bull-sports as a religious function. Miletos, where this occurs, was itself the reputed colony of the town of the same name on the North Coast of Eastern Crete, still known as Mílatos, where abundant remains occur of a settlement going back to Early Minoan times.[4] According to Strabo, who cites Ephoros, the

[1] Soph. *Ajax*, 172 seqq. ἦ ῥά σε Ταυροπόλα Διὸς Ἄρτεμις . . . . . ὥρμασε πανδάμους ἐπὶ βοῦς ἀγελαίας, &c. Cf. Max Meyer, *Arch. Anz.* (1892), p. 79.

[2] Head, *Historia Numorum*[2], p. 215 seqq., and p. 288, and B.M. Cat. *Macedonia*, p. 54 seqq. Gaebler, *Die ant. Münzen Nordgriechenlands*, iii, Pl. II, 1.

[3] See *P. of M.*, iii, p. 477 seqq.

[4] In Strabo the name is given (x. 4. 14) as Μίλητος (cf. Hoeck, *Kreta*, i, p. 418). The present form is always Μίλατος or Μίλατο. In 1890 Dr. Orsi published two painted sarcophagi from a chamber tomb here in *Mon. Ant.*, i, p. 208 seqq., and Pl. II, Figs. 1 and 2. In 1894, and again in 1895, I explored the site, securing evidence of bead-seals going back to E. M. II–III, a bronze axe-hammer (*c.* L. M. I), and of geometrical tombs in addition to the Late Minoan. In 1895 I excavated a

more celebrated city, with its four harbours, on what was later the Ionian coast, was founded by this 'Old Miletos' of Crete.[1] Its early renown, indeed, is shown by its appearance in the Homeric Catalogue,[2] and Sarpedon himself is said to have led the colonists.

Bull sacrifice at the *Boegia*.

The sanctuary of their new foundation at Didyma preserved a later record of the old Cretan connexion in the shape of an inner staircase with a marble ceiling presenting a huge relief of a maeander, inscribed ΛΑΒΥΡΙΝΘΟΣ.[3] But a survival of more special interest in the present connexion is to be found in the evidence supplied by inscriptions found on the spot of a festival in the adjoining *temenos* of the local Zeus Sotêr, in which an ox was sacrificed before the altar of the God by the winner of a contest known as the *Βοηγία*, and who himself bore the name of *Βοηγός*.[4] This may be reasonably taken to imply that the contest had involved 'cow-boy' feats and resembled the *taurokathapsia*. The object of the sacrifice is here a male divinity, the underlying character of which is sufficiently shown by the neighbouring record of the Labyrinth—in its original significance the cult-place of the *Labrys* or Double Axe. It is an interesting circumstance that one of the latest relics of the mother-city of Miletos when still in its Minoan stage is a painted clay sarcophagus or 'larnax' on one of the narrower sides of which is seen a descending male figure—his downward course marked by his upward flying locks—grasping a large 8-shaped shield,[5] and in whom in view of other analogies we may recognize the warrior God.

L. M. III *b* chamber tomb on the West face of the hill-top, the rich contents of which were undisturbed (*Preh. Tombs of Knossos*, p. 93 seqq.).

[1] Strabo xiv. 1, 26.

[2] *Iliad* ii. 647.

[3] B. Haussoullier, *Rev. Philologique*, 1905, p. 265, and Didymê, p. 93, &c.; Wiegand, *Abh. d. Berliner Akademie*, 1911, p. 49, and cf. *ib.* 1908, p. 35. See, too, *P. of M.*, i, p. 359.

[4] The repeated formula on the inscriptions found at Didyma is ΒΟΗΓΙΑΙ ΝΙΚΗΣΑΝΤΟΣ (see *Mélanges Henri Weil*, 1898, p. 48) which surely refers to some bull-grappling contest. B. Haussoullier (*op. cit.*)—who, however, had not before him the abundant evidences of Minoan bull-sports that have now accumulated—put forward the view that the *Βοηγός* was simply the breeder of the ox that had won the acceptance of the College of Priests—a prize-winner of a cattle-show. It is interesting to recall, however, that Chishull in his *Antiquitates Asiaticae*, published in 1728, (p. 94, No. 7, and note) had already suggested a connexion between the *Βοηγία* and the *Ταυροκαθάψια*. For the modification of the contest in favour of mere oxen in place of wild or half-wild bulls see my note (14) to p. 8 of *Ring of Nestor*, &c.

[5] A. E., *Preh. Tombs of Knossos*, p. 99 and Fig. 107. In my *Myc. Tree and Pillar Cult*, pp. 66 and 67, where the design on the Milatos Larnax was also reproduced (Fig. 50), I wrongly interpreted the sinuous projections rising from each side of the neck of the descending figure as rays like those of the Babylonian Sun-god Samas. The many examples of Minoan figures whose motion is indicated by flying locks of hair would now make such a mistake impossible.

§ 92. Discoveries of 1930: Outer Line of Enceinte Wall and Entrance System to the West: New 'Koulouras' over Earlier Houses.

Season's plans 1930—reconstitution in North-West region; Unexpected development on West border; Discovery of new outer Enceinte; Includes 'North-West Treasure House'; Traces of Enceinte wall West of 'Theatral Area'; Proto-palatial North-West Court within it; Enceinte wall contemporary; Outer entrance system on the West—ramp of early roadway; Platform of terrace and converging causeways; South-West Angle of outer Enceinte; Southern Section; Earlier entrance passage running East; Roadway West—comparisons with other Minoan roads of Crete and of Mycenae; Small chambers under roadways; Discovery of two new 'Koulouras' (2 and 3) forming, with 1, symmetrical line across West Court—made for disposal of refuse; Contents result of dumping and unstratified; Earth layers; Contents of 'Koulouras' 2 and 3 M. M. II, those of 1, M. M. III; 'Koulouras' cleared out at end of M. M. II; Their Sanitary object; also served as blind wells; M. M. I a houses beneath 'Koulouras' 2 and 3; House A—sunken circle and bowl in floor of chamber; House B, with Corridors and Magazines; Rich ceramic contents—M. M. I a; Jar of unique construction; Large Store jars; Part of purple gypsum Table with architectonic moulding; Acropolis houses North of 'Koulouras'; Room with utensils for domestic Snake Cult; Proto-palatial (M. M. I a) date of Outer Enceinte Wall; Extension along West Section of Northern border; Fortificatory character of Enceinte; Early Cretan and Aegean fortification.

Season's plans 1930: Reconstitution in N.W. region.

Apart from some minor investigations, my intention, as already stated, had been to devote the Season of 1930 to the work of reconstitution in the North-Western Palace region, where much remained to be done. This very considerable task—carried through by August of that year—might itself give an air of completeness to this side of the undertaking.

In pursuance of this plan, the upper elements of the Throne Room and its Antechamber were restored while, below, the two pairs of guardian Griffins were once more set in due array beside the seat of the last Priest-king and facing the doorway of his inner shrine.[1] Once more, as we have seen, the coursing bull of the spacious bull-grappling composition looks forth from the Portico over the Sea Gate.[2] Something like finality might seem

[1] See below, Section 115.

[2] See above, p. 13 seqq.

to have been attained, and the long tale of indebtedness incurred by the modern intruders in the House of Minos might at last be thought to have been absolved within the limits practicable.

Even while we were still engaged in carrying through these works, however, it already became evident that much more must be undertaken in another field before such a 'nunc dimittis' could be pronounced. 'Man proposes', but it would appear that the great Goddess of the spot had otherwise 'disposed', choosing her own time and season for new and unexpected revelations as to the boundaries of her Palace Sanctuary. The supplementary soundings on the West, indeed, brought out developments that concerned the very beginnings of the Palace history, and have supplied our first knowledge of the original lay-out of the buildings on its Western borders and beyond. They must form an interlude to the account of the later palatial stages, in part methodically set out in my last Volume and continued in the succeeding Sections of this.

Unexpected development on W. Border.

A sense of incompleteness had hitherto overhung the whole plan on the outer side of the West Court. Was there really no definite boundary line along this tract, either to the Court itself or to the complex of small Acropolis houses partially overlayed by it?

Two paved causeways had come to light, running respectively West and South-West from the Palace façade, and apparently converging at a point beyond the Court. This point had already formed the subject of exploratory soundings, but no traces of any such junction could be found there. The recent discoveries, indeed, have now shown that the two lines never actually met, being merged in the wall terrace on which they both debouched.

Outer Enceinte Walling—brought to light by Excavations of 1930.

Discovery of new Outer Enceinte.

The supplementary tests made at the beginning of April 1930—themselves of quite limited scope and including the investigation of a Roman conduit on the West Side of the Court—brought out a section of what proved to be a continuous line of massive walling. So important was this discovery that it became necessary to embark once more on a campaign of excavation comparable to that of the earlier years of work on the Palace site.

Fifty additional workmen were taken on, and the first result, a massed attack of some six weeks' duration, was to expose quite 60 metres of Western enceinte wall, which, at its Southern end, turned East at right angles, reaching the outer foundations of the West Porch of the Palace after an additional course of thirty-one and a half metres. At its Northern extremity it was

cut short by the walls of intrusive Late Minoan houses. We may at any rate infer that it enclosed the whole or a great part of the 'North-West Treasure House' situated in that region, beyond this, reaching the border of what we know to have been an Early North-East Court that preceded the construction of the 'Theatral Area' in its present form.

Includes 'N.W. Treasure House'.

This conclusion is something more than a conjecture. The 'North-West Treasury'[1] in its original form belongs to the Early Palace system, its repositories containing—in addition, doubtless, to relics in precious metals that have now disappeared—egg-shell ware of the finest M. M. II *a* class resembling that of the Royal Pottery Stores. In its later phase this building contained the finest metal objects discovered on the site, the bronze service, namely, consisting of an ewer and basins with chased decoration of unsurpassed beauty.[2] That such a Treasure House, with its truly palatial contents, should have been placed outside the enceinte wall of the Palace Sanctuary is in itself hardly conceivable. That, as a matter of fact, it lay within it is practically demonstrated by the appearance, immediately North of it, of the lower courses of a line of walling which, from its construction of large blocks with a plinth on its Western border, must be regarded as the continuation of the enceinte wall in this direction. (See Diagrammatic Plan, Fig. 30.) An angle of this, turning Westward, would have included the 'Treasure House' area, joining the other section of the enceinte wall beyond, which here turned East under the Southern steps of the Theatral Area.

Traces of Enceinte Wall W. of 'Theatral Area'

As shown in the photographic Figures 31, 32, what seems to be a Northern offshoot of this wall, where it runs below the 'Theatral Area', was brought out by the recent excavation crossing the line of the paved Minoan way that runs West there. The wall foundations were overlaid by this road, which had here broken through its line. As has been demonstrated by the very full stratigraphic investigations beneath the Eastern steps of the 'Theatral Area',[3] and its paved square, this Western causeway was originally designed to serve an old 'North-West Court', the pavement of which slopes gradually up beneath the steps in question.[4] The date of the pavement is itself approximately fixed by the appearance among the later sherds found beneath it of fragments of polychrome ware of the M. M. II

[1] Originally called the 'North-West House': see A. E., *Report, Knossos*, 1903 (*B. S. A.*, ix), p. 112 seqq., and cf. *P. of M.*, i, p. 247. The beautiful polychrome pot there illustrated (Pl. III) was from this building.

[2] *P. of M.*, ii, Pt. II, p. 637 seqq.

[3] See *P. of M.*, iii, p. 248 seqq, and Fig. 172.

[4] The continuation of the paved causeway can be traced running East across the section of the M. M. II *a* Court that is visible beyond the platform of the Eastern steps of the 'Theatral Area'.

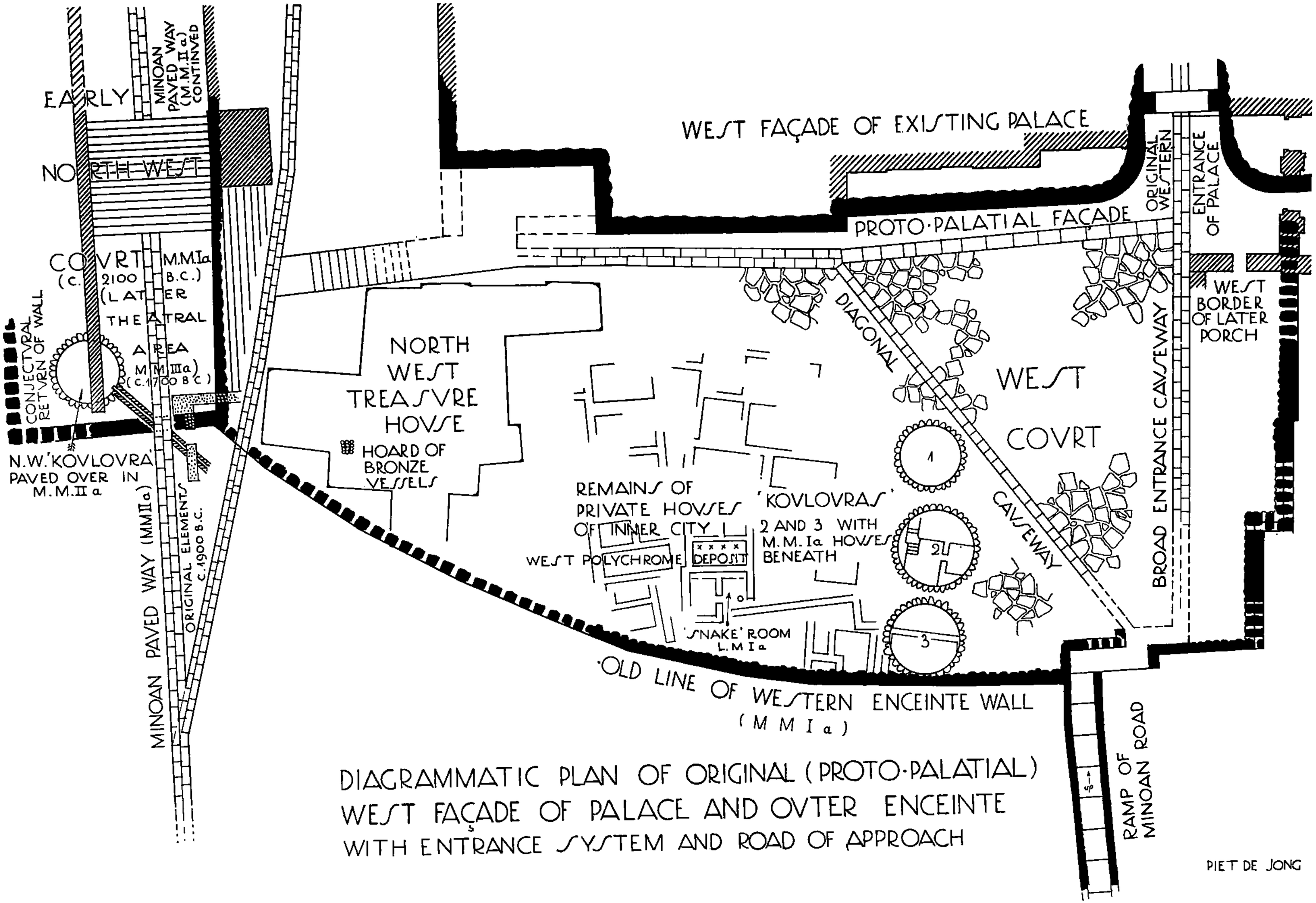


FIG. 30. ORIGINAL WEST FAÇADE LINE OF PALACE WITH ENTRANCE RUNNING EAST, TOGETHER WITH OUTER ENCIENTE AND ITS APPROACHES.

FIG. 31. VIEW OF STRUCTURES ON WEST BORDER OF 'THEATRAL AREA' SHOWING LOWER COURSES OF EARLY ENCEINTE WALL, BREACHED BY MINOAN PAVED WAY: AS SEEN FROM THE WEST.

class showing the 'racquet and ball' pattern,[1] and practically identical with that on an imported piece of Minoan painted pottery found at Harageh, near

FIG. 32. LOWER COURSES OF EARLY ENCEINTE WALL BREACHED BY MINOAN PAVED WAY: AS SEEN FROM THE NORTH.

Kahun in Egypt, under conditions that date it from the reign of Senusert II (1906–1888 B. C.).[2] Connected with this early paved Court, moreover, was a 'Kouloura', or circular-walled pit, brought to light by the North-West corner of the 'Theatral Area', and overlaid by its pavement—the latest

[1] *P. of M.*, ii, Pt. I, p. 211 seqq., and Coloured Plate IX, facing p. 215.

[2] R. Engelbach, *Harageh* (British School of Archaeology in Egypt, twentieth year, 1923), pp. 10, 11, and cf *P. of M.*, ii, Pt. I, pp. 211–13.

ceramic remains within which dated from the same M. M. II *a* epoch. It thus appears that the paved way running West—elsewhere described as the earliest road in Europe—goes back to the beginning of the Nineteenth Century B.C. and must have been at least five centuries in continuous use.

'Proto-Palatial' N.W. Courts within Outer Enceinte.

It follows that the gap in the Northernmost section of the old enceinte wall—due to its being traversed by this paved way, in connexion with M. M. II *a* Court on this side—was itself made round about 1900 B. C., a circumstance which involves a still greater antiquity for its construction.

But this evidence does not stand alone. The lowermost courses of the wall stand in fact in relation to a still earlier paved Court, for the dating of which the stratigraphic test beneath the Eastern steps of the 'Theatral Area' has again afforded a clear light.

The pavement of this Court—which extended over the whole area, and sloped up the border strip to the East of it—so far as it has been explored,[1] lay 70 centimetres beneath the other at the point where the stratigraphic section was taken, and under it was found a mixed filling containing Neolithic and Early Minoan sherds, together with a few belonging to the earliest Middle Minoan phase, but nothing later. Its construction must therefore go well back into the M. M. I *a* Period. For the epoch thus indicated we have, again, an approximate chronology, in this case due to the recurrence of imported Babylonian cylinders of the Amorite First Dynasty of Babylonia,[2] and of a class that first becomes frequent in the reign of Hammurabi. The date of Hammurabi's accession had been fixed by Kugler on an astronomical basis at 2123 B.C.[3] One of these cylinders was found in Tholos Tomb B at Platanos in association with painted vessels showing a certain advance in M. M. I *a* technique, and we may fairly date the beginnings of this style to an epoch approximately corresponding with that of the great Babylonian law-giver.

Contemporary date of Walling.

Since the wall to the West of this paved area—for the dating of which we have had such a good approximate guide—seems to have stood in relation to this 'proto-palatial' North-West Court, the date of its construction must go back to round about 2100 B. C. It will be seen that this chronology closely agrees with the evidence supplied by the more Southerly section of the early enceinte wall on this side.

[1] See sketch-plan, *P. of M*, ii, Pt. II, p. 587, Fig. 366.

[2] See *P. of M.*, i, pp. 197, 198, and Fig. 146 (haematite cylinder: from early Tholos at Platanos), and *ibid.*, ii, Pt. I, pp. 265, 266, and Fig. 158. The Platanos Cylinder was found, according to Xanthudides (*Vaulted Tombs of Mesarà*, ed. Droop, pp. 116, 117 and figure), in Tholos B of that site.

[3] Kugler, *Sternkunde und Sterndienst in Babel* (Münster, 1912), II. Theil, 1. Heft.

Near the angle where, after the interval occupied by the 'Treasure House', the old wall reappears—about 33 metres West of the bastion of the

FIG. 33. RAMP OF MINOAN ROADWAY SUPPORTED BY SIDE WALLS, RUNNING EAST TO TERRACE OF WEST COURT WITH ASCENDING PAVED WAY: UPPER STEPS RESTORED.

'North-West Porch'—its upper part has suffered a good deal from late Minoan building operations, but the lowermost courses are well preserved, including a strip of pavement on the outer side—a feature that recurs in the wall West of the 'Theatral Area'. Blocks measured by me in the two

lowest courses were, respectively, 1·20, and 1·28 metres in width, and ranged in height from 40 to 53 centimetres. The wall here just above the level of the paved border was over a metre thick.

Outer Entrance System on the West.

Outer Entrance System on the West.

Some 41 metres South of the point where the Northward course of the enceinte wall breaks off, a much more complicated section of the early enceinte line was brought to light, of great interest as supplying the main outlines of an original outer entrance system on this side.

Ramp of early road.

The wall here, which is well preserved, was found to form an angle receding slightly East, after which it continued its Southern course. At the point, however, where the line of the enceinte wall thus receded, it was joined at right angles by a Minoan roadway, supported by two lateral walls, and ascending by a gradual ramp, which thus reached a projecting terrace of this outer wall line (see Fig. 33 and Isometric View, Fig. 34).

Bordering this terrace below, in the South-West angle formed by the initial section of the road, was a small walled enclosure with an entrance on its Western side, provided with gypsum jambs which seems to have formed an exterior Guard Room.

Platform of terrace and converging causeways.

Arrived at the platform of the terrace the ramp formed by the roadway reached an entrance passage, of the same width but without any outer parapet. This stepped up East again at the end of the small projecting terrace, and thus attained the level of the original outer border of the West Court. (See Isometric View, Fig. 34: by Mr. Piet de Jong.)

At this point two already existing factors throw an additional light on the entrance system. These are the two causeways already referred to[1] as running across the West Court, the one, of single slabs, in a South-West direction; the other, with a double line of slabbing, heading directly West from the original Palace entrance on that side.

The actual terminal course of these two causeways has disappeared, but the points at which they would have reached respectively the terrace edge formed by the massive enceinte wall in this section is accurately defined. The narrower causeway, which runs diagonally across the Court, is seen to have abutted on this terrace exactly, to a few centimetres, at the point where the passage from the entrance ramp reached it. The broader paved way, if slightly prolonged, would strike the Eastern border of the terrace at right angles at the same level South of the termination of the diagonal line (see Plan, Fig. 34).

[1] See above, p. 49.

South-West Angle and Southern Line of Outer Enceinte.

S.W. Angle of Outer Enceinte.

The outer enceinte wall itself turns abruptly East at a point 18 metres South of the abutting point of the causeway on that side. The West front of

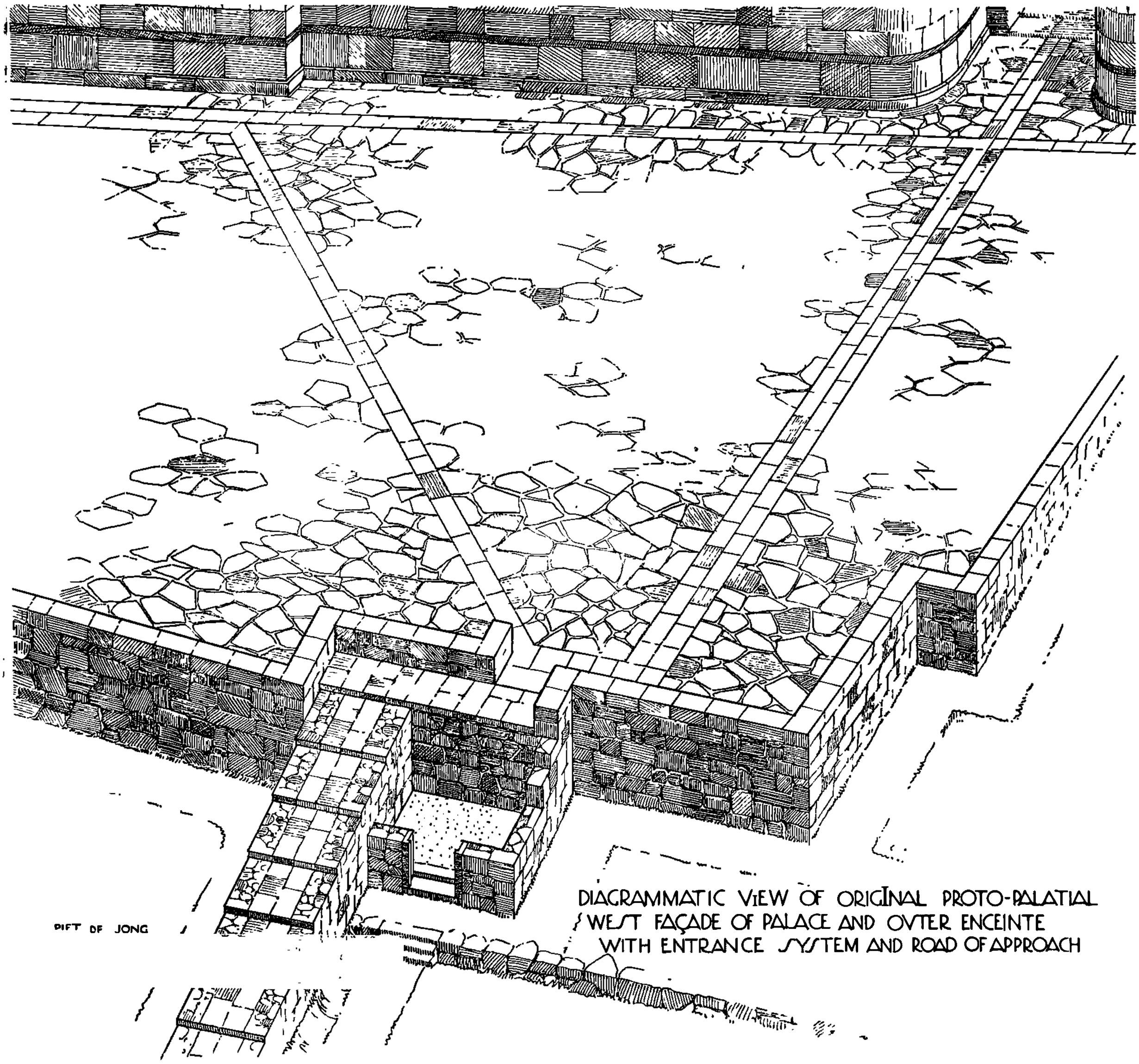


FIG 34. ISOMETRIC VIEW OF OUTER ENTRANCE SYSTEM ON WEST (PARTLY COMPLETED): WITH ORIGINAL WEST ENTRANCE OF PALACE.

the intervening section of the wall was exceptionally massive, and it has also been possible to replace in position some of the blocks that had fallen from

it. The face of one of these is 1·80 metres broad, with a height of 45 centimetres, and is 1·25 metres in depth; another, of slightly less face breadth and of the same height, ran 1·40 metres into the wall.

Here, at the South-West angle, the soft 'kouskouras' rock runs up to within three courses of the terrace level.

Southern Section of Walling.

The Southern Section of the wall beyond this angle seems to have been much ruined by seismic forces, and many of the great blocks that had composed it lay tossed hither and thither at its foot (see Fig. 35). The virgin rock, it may be observed, on this side falls suddenly away, and immediately beyond appear the lower courses of a considerable Minoan mansion. Eight metres before reaching the West Porch this section of the enceinte wall makes a short projection to the South, and the remains of its lowermost courses form a massive block, parallel, at a lower level, to the Southern frontage wall of the West Court.

FIG. 35. SOUTHERN SECTION OF OUTER ENCEINTE WALL, SHOWING SEISMIC RUIN.

An incised mark visible on a block of this terminal section of the enceinte is of exceptional size—it is an Λ sign[1] 35 centimetres high and 33 centimetres wide at its base. This large scale seems to answer to the 'proto-palatial' phase of the building.

Earlier Entrance Passage running East.

It has been already shown that the paved causeway that runs due South along the existing Palace wall to the 'West Porch' itself belonged to an older arrangement of the frontage on this side, which followed a line some three metres West of the later façade.[2] This earlier frontage line, as the huge base-blocks incorporated in the pavement show, had curved inwards on approaching the double line of causeway (which here runs under the later walling), and thus formed one side of an original entrance passage heading due East. The wall to the left of this and, probably, also that to the right, seem to have curved in. The proto-palatial façade line is sketched in the Isometric View, Fig. 34.

The arrangement, as we see it in the existing building, of a columnar porch facing North was thus shown to belong to a later Age. This 'West Porch', as at present preserved, reveals two successive stages of construction[3]—the earlier on a lesser scale—and these must themselves have covered a considerable period of time. It looks, indeed, as if the setting out of this side of the building in its permanent shape may have been carried out in the concluding stage (*b*) of M. M. 1. The latest sherds under the great base-blocks of the earlier façade were of M. M. I *a* date, the bulk being Early Minoan and Neolithic.[4] The double Causeway running due East from the old Western entrance to the South-West Terrace of the enceinte was of the same early date, and the Entrance System on this side, with which it stands in relation, must go back, at least in its original form, to the same 'proto-palatial' Age. Thus at both extremities of the newly discovered enceinte wall there is concordant evidence as to its M. M. I *a* date—not later, that is, than the close of the Third Millennium B.C.

Minoan Roadway running West from Outer Enceinte.

Roadway West.

The roadway running at right angles East from the entrance terrace of the enceinte wall was of the typical Minoan class, though its pavement had disappeared. Its ramp was supported by two side walls from 60 to 70 centimetres in diameter, with an interval between them of about 1·80 metres,

[1] Its two 'legs' are 3·5 cm. wide. This sign is not included in the Table, *P. of M.*, i, p. 135.

[2] See *P. of M.*, i, pp. 129–32, and ii, Pt II, p. 660 seqq.

[3] *Ibid*, p. 679 seqq.

[4] The lower face of the third base-block from the North which had been turned over in order to examine the deposit beneath it, showed a group of early signs. (Cf. *P. of M.*, ii, Pt. II, p 613, n. 2.)

giving thus a mean breadth of about three metres for the roadway. The central stepped slabbing, as it originally existed, is well illustrated by the pavement of a similar ramp outside the West Porch. The terrace projection of the enceinte wall on opening at right angles from the landing was 1·85 metres broad, about the same as the middle section of the ramp, and the width of the larger paved causeway, crossing the West Court above, 1·40 metres.

It will be seen that the width of three metres, approximately attained by the road running out West, is somewhat less than that of the main Minoan roadways known to us. The old road indeed, already excavated, leading from the 'Theatral Area' towards the 'Little Palace', shows a central paved causeway consisting of two rows of slabs 68·5 centimetres each in width, and giving a total width of 1·37 metres or practically the same width as that above referred to, which runs from East to West across the Southern end of the West Court. But to this must be added the two cement-covered wings of the roadway, in each case 1·20 metres broad, so that the whole width was 3·77 metres. This approximates to the width of the section of the 'Great South Road'[1] on the Visala site which was round about 4 metres, in some places not more than 3·80 metres. The central paved way running up from the old bridge over the Vlychià brook, to the South-East of the Palace, was about 3·50 metres.[2]

Comparisons with other Minoan roads of Crete and of Mycenae.

These measurements, it will be found, very nearly answer to the average width of the Minoan roadways that ramify from the site of Mycenae. A good example is supplied by the well-preserved remains near Agrilo Vounaki, where the pavement between the outer edge of the causeway and the inner terrace wall was, according to my own measurement, 3·70 metres.[3]

Another interesting point of resemblance to the road construction about Mycenae came to light about five metres from the starting-point of the ramp where it reaches the enceinte terrace. Here, on the ground level of its Southern side, there is visible an opening in its supporting wall, the two sides of which are formed by orthostatic blocks, and which must have given entrance to a small chamber beneath the road pavement. Similar small chambers exist at certain points beneath the Mycenae roads.

Small chambers under roadways.

At 3·50 metres distance from their starting-point the supporting walls of the road, which up to this point had run out due West from the line of the Enceinte, took a slight South-Westerly turn. It is natural to suppose that

[1] A section of this by the 'Temple Tomb', found in 1931, was 3·52 m.

[2] *P. of M.*, ii, Pt. I, pp. 150, 151, and Plan, Fig. 77.

[3] Colonel Steffen's measurement near the same spot was 3·58 m., *Karten von Mykenai, Erläutender Text*, p. 10.

this small deflection of its course was due to the wish to strike more or less at right angles the main line of the 'Great South Road' on its way from the Vlychià bridge towards the Harbour Town of Knossos, as already sketched in Volume II of this work.[1]

Discovery of two more 'Koulouras' or Circular Walled Refuse pits off the West Court'.

Discovery of two new 'Koulouras'

It is clear that the space between this entrance system and the original West façade of the Palace was occupied by a broad section of the West Court. From a line, however, answering to that of the wall between the 7th and 8th Magazine the Western part of the enclosed area entirely changed in character.

On this line, just by the point where the narrower causeway starts diagonally across the Court, there had already been brought to light and excavated during the first year's work—beneath a later extension of the paved area of the Court—a spacious walled pit, known as the 'Kouloura' from the term applied to it by our Cretan workmen. The interior width of this above the plinth was nearly 5·10 metres and the height of the rough walling round about three metres. As, in the case of a similar construction in the West Court at Phaestos and of another example, subsequently excavated, that partly underlay the North-West Corner of the 'Theatral Area' at Knossos, this walled pit contained in its earth deposit masses of debris, largely consisting of broken pottery.

Due West of this, on the actual border of the Enceinte wall, the tests made in connexion with this outer line revealed the existence of another similar 'Kouloura' with a slightly larger diameter, and further investigation brought to light, in the space intervening between this and the first discovered example, a third walled pit of precisely the same kind. The three 'Koulouras' were symmetrically arranged in a line running due West, and forming thus a kind of border to the North side of the South-West bay of the West Court. They are well shown in the 'horseback' view, Fig. 36. No. 2 was 6·20 metres in diameter above the plinth and 3·10 deep, and the corresponding measurements of No. 3 were 5·80 and 3 metres.

[1] *P. of M.*, ii, Pt. I, p. 140, Fig. 71 : sketch-plan of Palace and surroundings. At a point about 14 metres beyond that where the newly discovered roadway takes the slight turn to the South-West, remains appeared which led at first to the supposition that it had crossed another early road. Here occurred big gypsum blocks and foundations running North and South, but the pottery associated with these remains was Geometric, and they must be regarded as an intrusive feature.

Symmetrical line of walled pits

This symmetrical arrangement and the careful fitting in of these walled pits into the space between the diagonal Causeway and the outer Enceinte

FIG. 36. THE TWO NEW 'KOULOURAS' WITH THAT FIRST DISCOVERED IN LINE WITH THEM BEHIND, AS SEEN FROM ABOVE NEW WESTERN ENCEINTE WALL.

pits across W. Court.

walling shows that they were all planned and executed at the same time in connexion with the Palace needs. Considering that, as we have seen, there

was another similar 'Kouloura' constructed at the same time on the N.W. angle of an old North-West Court, and that, by analogy, others may have existed on the Northern, Eastern, and Southern borders of the building, it becomes evident that these circular walled pits had been deliberately planned as an important part of the structural arrangement of the Palace in the form in which we know it, and were designed to meet a definite sanitary need. This was the ultimate disposal of rubbish and refuse, which in the first place would have been thrown down in superficial heaps both within and outside its walls.

Made for disposal of refuse.

In order to investigate better the layers of deposit within the more Easterly of the two newly-discovered 'Koulouras'—referred to as No. 2—the East half only was at first excavated, leaving a cutting showing the face of the remaining half. The contents, however, proved to be mainly a continuous mass of earth and rubble stones, with a considerable mixture of potsherds. This mass failed to show any real stratification, except that in the first metre of the deposit a band of this rough material, averaging about 30 centimetres in thickness, was separated from the underlying rubble by an earth layer of about the same thickness, and had been again covered over by a superficial earth deposit some 20 centimetres deep. The half-metre tests, moreover, showed that such earth layers as could be made out—five in all—were not horizontal, but sloped down away from the North-East borders of the pit, from which side it had been naturally filled. In this way a certain number of sherds of the latest epoch represented in the deposit—answering to the early phase, *a*, of M. M. III—had found their way to the lowest level.

Contents result of dumping: unstratified.

Earth layers.

It must, indeed, be borne in mind that an essential difference exists between an actual rubbish heap, gradually formed, and the dump into which such heaps were ultimately thrown—here represented by the contents of the 'Koulouras'. The conditions, indeed, are reversed. The layers of deposit in a rubbish heap indicate the gradual stages of its growth, and have a relative chronological value for the period of its formation. But, when the same heap is dumped into a pit, the most recent elements being uppermost naturally find the lowest place, while its earliest ingredients appear on the top.[1]

[1] The misleading effect of such 'dump' layers is reflected in Mr. Wace's otherwise careful account of the contents of the heap of débris found between the West Wing of the Lions' Gate at Mycenae and the East wall of the Granary (*J. H. S.*, xxv, p. 18 seqq.). In the excavation this was divided into thirteen horizontal layers 'for the purposes of record' (p. 20). Unfortunately in the Section, Fig. 4, p. 19, the word 'stratification' is applied to

Contents of Koulouras 2 and 3, M. M. II; those of No. 1 M. M. III.

No real stratification could therefore be made out in the newly-discovered 'Koulouras' Nos. 2 and 3 of the West Court series. The ceramic contents, however, were confined, as a whole, to a clearly delimited period. The great mass of the sherds belonged to the earlier and later stages of M. M. II, while a small number might be referred to the earlier phase, *a*, of M. M. III.

Kouloura No. 1, on the contrary, explored at an earlier stage of the Excavation, supplied the evidence of two successive periods of use.

The great bulk of the contents there belonged to the M. M. III Period, covering its entire course, but especially abundant in its later stage that suffered the interruption of a great Earthquake. It seems, indeed, to have been paved over at the time of the considerable restoration of the Palace that succeeded that disaster.

Cleared out at end of M. M. II.

At the very bottom of the deposit here, however, there were appreciable remains of pottery belonging to the M. M. II Period. Such sherds were practically absent among the overlying materials, though these represented, in a tumultuary and non-stratified shape, all the successive phases of M. M. III.

The unavoidable conclusion, therefore, was that this walled rubbish pit had been cleared out about the close of M. M. II, or possibly at the slightly later date that represents the epoch when 'Koulouras' Nos. 2 and 3 fell into disuse, and that it then became a principal dumping place for the rubbish heaps of M. M. III. At the time of the succeeding Restoration the use of this group of 'Koulouras' definitely ceased, and the whole series was paved over in order to widen the West Court on that side.

Sanitary object of 'Koulouras'.

The existing evidence, it will be seen, enables us to draw certain definite conclusions regarding the history and functions of these circular, these. But in an examination of the ceramic contents of these 'strata', as preserved in the Museum at Nauplia, which I undertook in company with Dr. Mackenzie, the true character of the deposit as representing layers of a dump became evident. Thus in the lower Section, next the rock, represented by layer 1, there occurred fragments of 'hydrias' of a type so late (cf. Blegen, *Korakou*, p. 69, Fig. 100) that —to quote a note of Dr. Mackenzie on the subject—it was, in his opinion, doubtful whether they could even be included in L. M. III *b*. With them, moreover, were fragments of 'deep bowls' like those illustrated in *B. S. A.*, XXV, Pl. V, also found in a similar relation at Korakou, and equally late in character. In 'stratum VIII', on the other hand, fragments of stirrup vases of Tell-el-Amarna style became frequent, so that, according to this 'stratification', the very latest class of anything that can be called Mycenaean was in existence before the second quarter of the fourteenth century B. C. In 'stratum II' there had already occurred fragments of stirrup vases with the ? mark of the post-Tell-el-Amarna class. The whole deposit in short was an inextricable jumble, resembling that of our 'Kouloura' dumps.

walled receptacles.[1] They had served, as already noted, for the disposal of refuse, from time to time, no doubt, collected from various minor rubbish-heaps within the Palace borders. The phenomena connected with No. 1 point to its having been cleared out at intervals, while the occasional earth layers may be best explained as due to the recurring need of counteracting the effluvia of decaying matter, animal or vegetable. On the other hand, the deliberate construction of a whole row of these great walled pits on the borders of the Palace Court and forming an integral part of the layout of the building must be taken as a further proof of the strong instincts of its architect in favour of sanitation. It is, indeed, all of a piece with the elaborate drainage system here carried out—

FIG. 37. STONE DUCT LEADING TO NORTH-WEST 'KOULOURA'.

with its tributary ducts debouching into spacious underground channels, its latrines and other refinements of quite modern contrivance, including such features as a ventilating shaft.

It is clear that these circular walled pits also to a certain extent served as blind wells for the disposal of surface waters. This was the case with the 'Kouloura' of the old West Court of the Palace at Phaestos, the use of which, Also served as blind wells.

[1] Of the manner in which refuse and rubbish was disposed of in the latest Age of the building we have no evidence. It looks as if it may have been removed farther from the Palace borders.

as its contents showed, ceased about the close of M. M. II. At Knossos itself the 'Kouloura' of the same date by the North-West Corner of the later 'Theatral Area',[1] shows, on the South-East extremity of the circumference of its walled pit, a raised stone duct. (See Fig. 37.) In this, as in the other cases, there was no trace of any cement lining of the inner face of the walls, a circumstance which sufficiently shows that, though they were used as blind wells, they had not served as reservoirs.

Discovery of M.M. I *a* Houses beneath the 'Koulouras'.

M. M. I *a* Houses beneath 'Koulouras' 2 and 3.

The discovery of two more of these great walled receptacles—thus completing their line to the boundary wall—did not by any means exhaust the interest of this part of the site. In the case of the earlier known 'Kouloura' the base of the surrounding wall had rested on the Neolithic surface. This, however, shows a tendency to descend in a Westerly direction, and in both the newly excavated examples the plinth at the foot of the circular walling was found to rest on the lower part of the walls of chambers belonging to exceptionally fine houses of M.M. I *a* date.[2]

House A.

Of these, House A, beneath 'Kouloura' No. 2, showed a compartment on its Eastern side, the floor of which was coated with a brilliant red-coloured plaster, and, at the Northern extremity of this, six steps, formed of the same red-coloured plaster, led down, at a slightly skew angle, to a lower compartment, the floor of which was coated in the same way. This lower space opened on its South side on another compartment, here with a flooring of fine white plaster. The walls in both cases had been coated with plaster similar to the floors, and a mass of white plaster, apparently from the ceiling, lay on the floor of the Northern room. The line of the wall West of this could be partly traced by means of cautious excavation beneath the 'Kouloura' plinth on that side. (See Plan, Fig. 38.[3]) On the North border of the basement space on that side was a well, containing only M.M. I *a* sherds, that had supplied the house with water.

In this house interest centred on a shallow sunken circle, 65 centimetres in diameter, in the Northern basement space on which the staircase debouched. This was formed of the same red-faced plaster as the pave-

[1] See Plan, p. 51, Fig. 30.

[2] These houses were carefully explored and planned by Mr. and Mrs. J. D. S. Pendlebury, and a detailed account by him is given in *B. S. A.*, for 1931, p. 53 sqq.

[3] For a full description of this House, see *ib.*, pp. 53–6. In Mr. de Jong's plan (Fig. 38) the S. Room varies.

ment and showed a central hollow 25 centimetres wide and 9 deep. (See Fig. 39 and Plan and Section.) A little West of it was a smaller hollow.

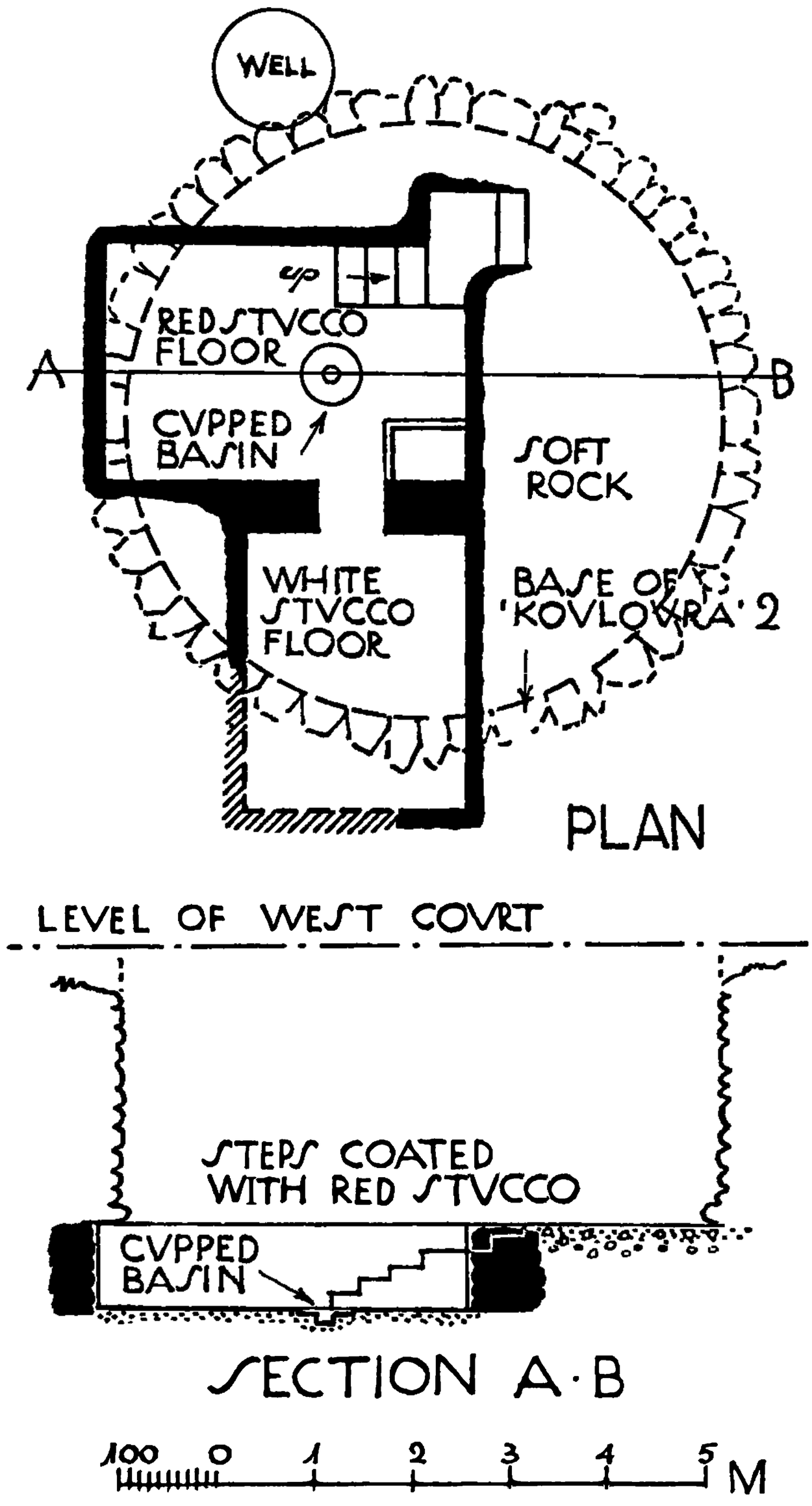


FIG. 38. PLAN OF HOUSE A, BENEATH 'KOULOURA' 2.

Sunken circle and bowl in floor of Chamber.

Its central cup, though here placed in a flat cavity that is round and not square, suggests indeed a comparison with the table of offerings found in the early *sacellum* at Phaestos. One imperfect relic found in this house certainly stood in a religious connexion. This is the head of a small male figure (Fig. 41) identical with those of which so many contemporary examples have come from Cretan votive stations like that of Petsofà. It is somewhat roughly moulded in clay and shows a flat-topped head-dress of the usual kind, here with traces of red and black stripes, while the short locks of hair are coloured brown. It terminates below the neck in a projecting wedge showing that, as in the case of other Minoan figurines, the head was made in a separate piece and inserted into the trunk by a tenon.

In the corner space near this bowl-shaped hollow was a shallow receptacle formed in the same manner, but of roughly oblong outline.[1] Its containing ledge was 6 centimetres in height and breadth.

[1] One of the longer sides is 70 centimetres in length, the other 80 cm.

FIG. 39. VIEW OF PART OF M. M. I *a* HOUSE BENEATH 'KOULOURA' 2. STEPS DESCENDING TO BASEMENT ROOM WITH RED PLASTER FLOOR WITH CUPPED BASIN.

It may have served as a small cistern. The circular basin has no apparent do. stic usefulness and may well have been a receptacle for food and drink offe gs.[1]

[1] Mr. Pendlebury (*loc. cit.*) inclines to this view.

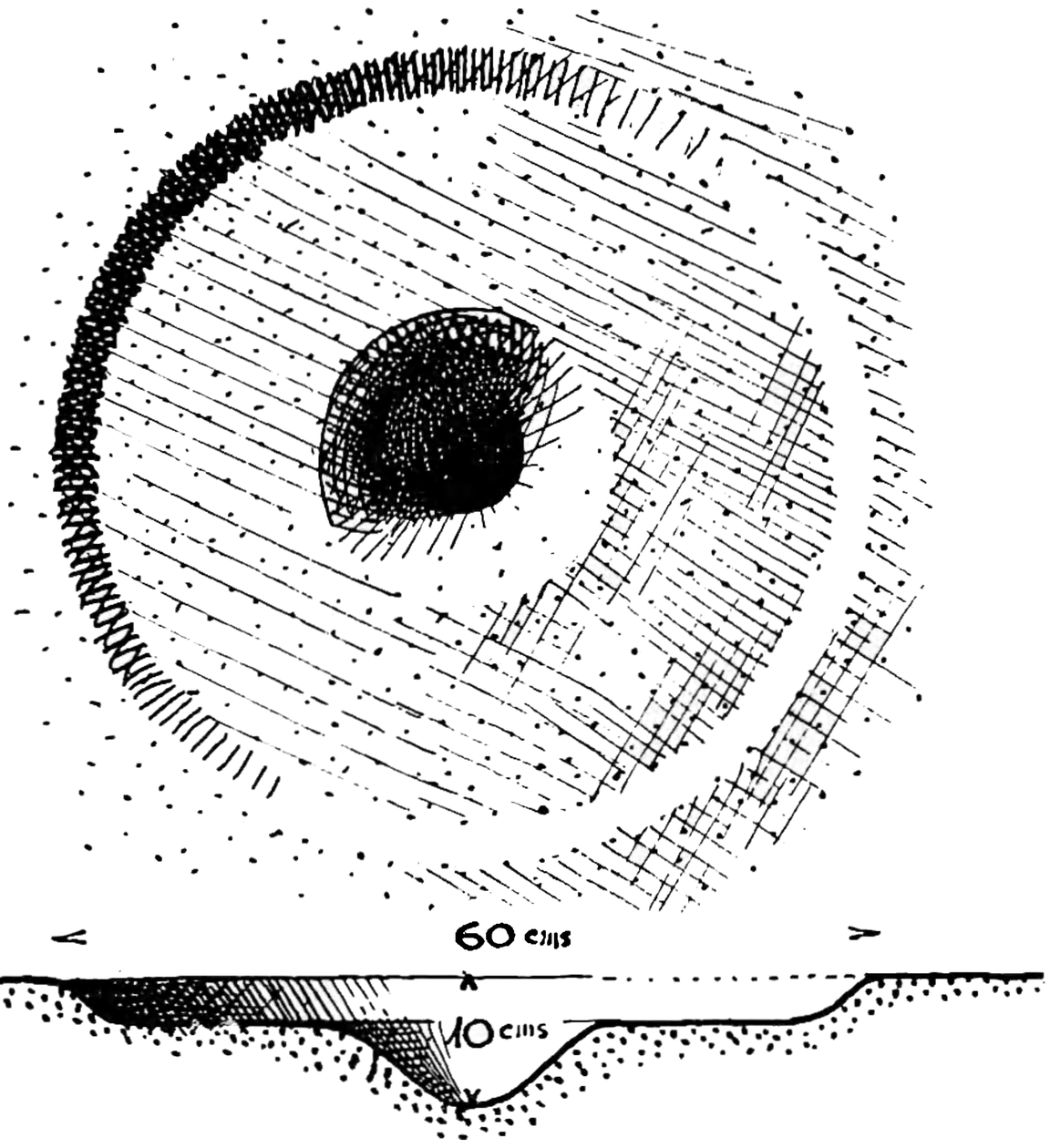


FIG. 40. PLAN AND SECTION OF PLASTER BASIN.

House B with Corridors and Magazines.

House B, beneath 'Kouloura' 3—which was better built and more fully representative — showed an extension beyond the walling of the pit on its North side including Corridors and Magazines. The Neolithic sub-soil, moreover, had here been left intact on one side to a greater height, and supported the floor of a small Magazine on an upper level.[1]

The main basement space of this house, as revealed beneath the circle of the 'Kouloura' (Fig. 42 Plan and 43 Excavation) had this in common with House A, that the floor of its Eastern half was raised above the level of the compartment West of it. The original floor here had, however, been on the same level as the other, 50 centimetres lower, and some slightly earlier elements—transitional E.M. III—were brought out amongst the lower stratum.[2] It is necessary to suppose that, as in other cases, access to the basement rooms had been obtained by means of wooden stairs or ladders. The lower courses of the walls were here—unlike House A—of good stone material, and a heap of clay bricks,[3] burnt to a deep red, found on the floor of the Eastern basement, gave a clue to the

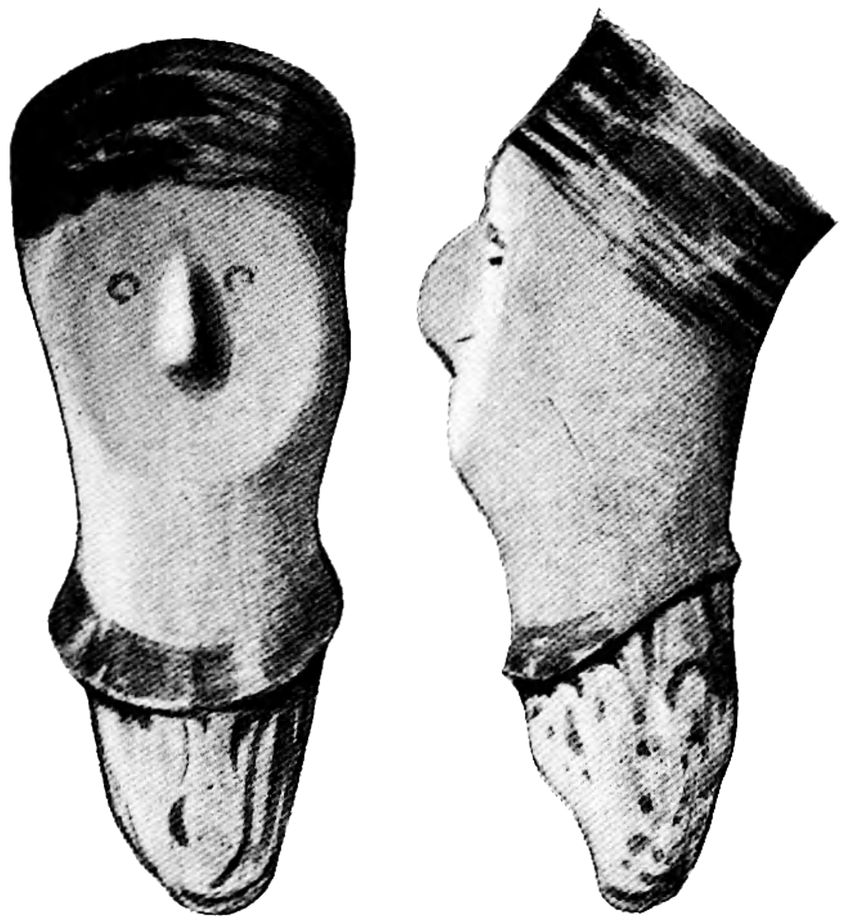


FIG. 41. HEAD OF FIGURINE FROM HOUSE A.

[1] From revised drawings of Mr. Piet de Jong, based on those of Mr. J. D. S. Pendlebury.

[2] There was also, as Mr. Pendlebury points out, a certain number of sherds on the upper level showing the beginnings of polychromy.

[3] The size of these bricks, according to Pendlebury, *loc. cit.*, p. 59, was 30 × 9 × 9 centimetres.

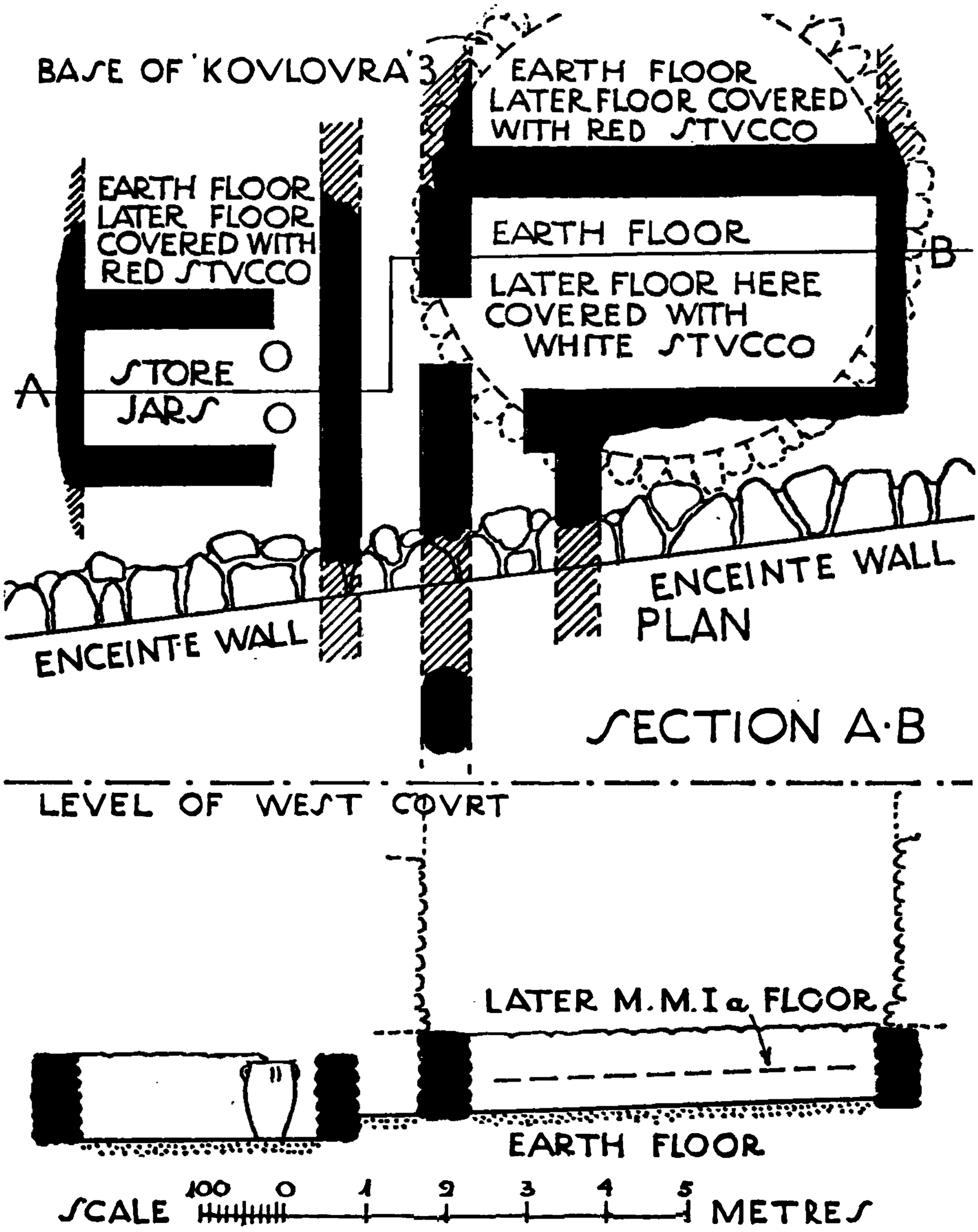


FIG. 42. PLAN AND SECTION OF M. M. I *a* HOUSE B BENEATH 'KOULOURA' 3.

construction of the upper story. The pavements were all of clay plaster with a white coating, and neither steps nor any kind of floor basin were here brought to light.

Rich ceramic contents: M. M. I *a*.

In other respects the ceramic contents of this house, as summarized below, were exceptionally rich and throw a new light on the potter's art as it existed at the very beginning of the Middle Minoan Age. It also

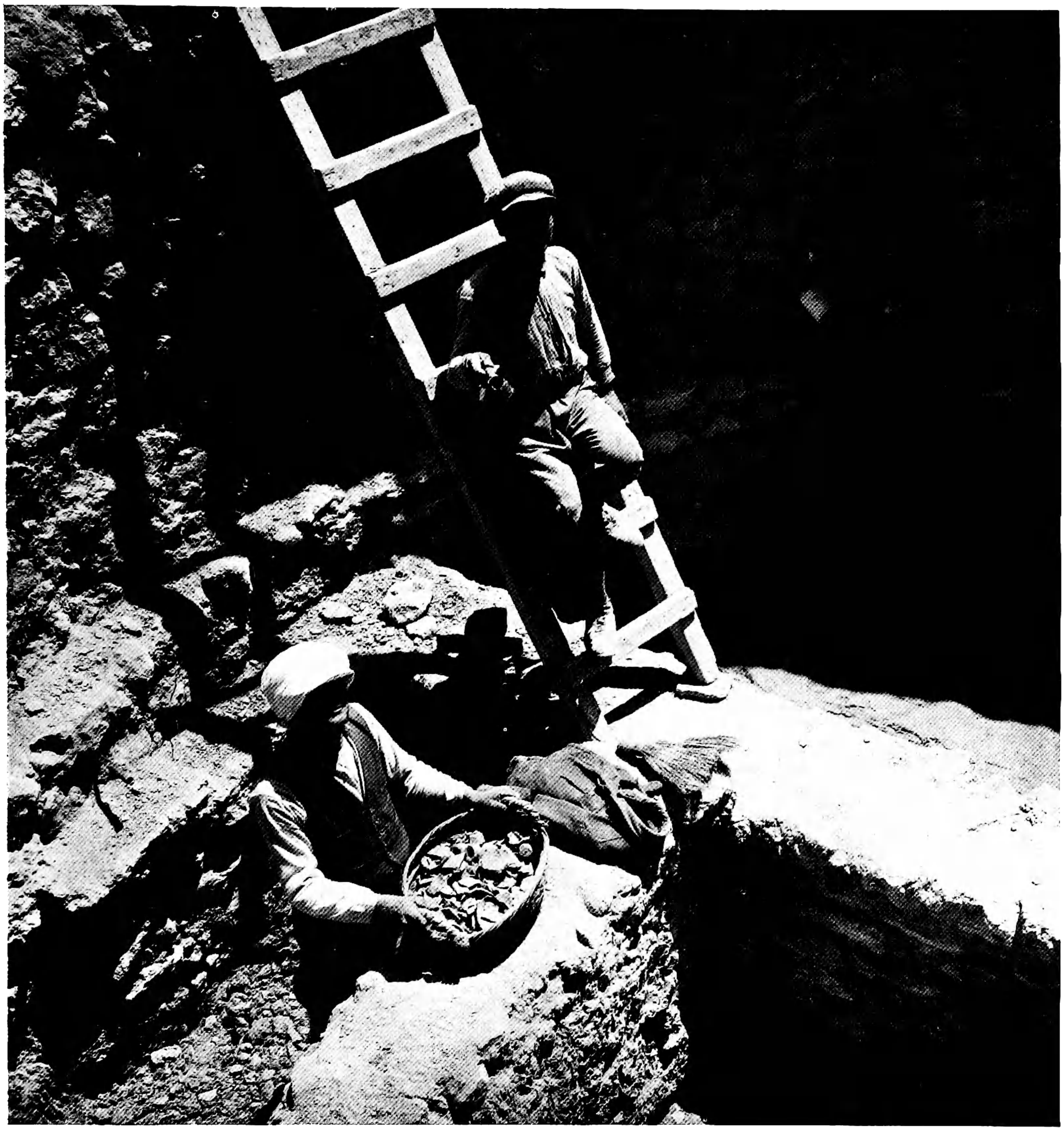


FIG. 43. VIEW SHOWING EXCAVATION OF M. M. I *a* HOUSE B BENEATH WALLING AND INNER PLINTH OF 'KOULOURA' 3.

supplied valuable illustrations of the incipient stage of polychromy, which is already noticeable in M. M. I *a*.

A more general account of the pottery found in the M. M. I *a* houses beneath the newly discovered 'Koulouras' is reserved for the note appended to this Section. As having a special reference to their domestic economy there may be here mentioned the 'loom-weights' Fig. 51, 27, a

fragment of a large thick tray with horizontal handles that may well have served as a portable hearth,[1] and the upper part of an 'incense-burner' of exceptionally fine fabric.[2] It was covered with a dark red slip and showed the central hole through which the charcoal embers were inserted, in this case — unlike later examples — from above. The aperture was surrounded with two white rings, beyond which was a circle of originally sixteen holes, and round the outer border, another white ring. (See restored view and section, Fig. 44.)

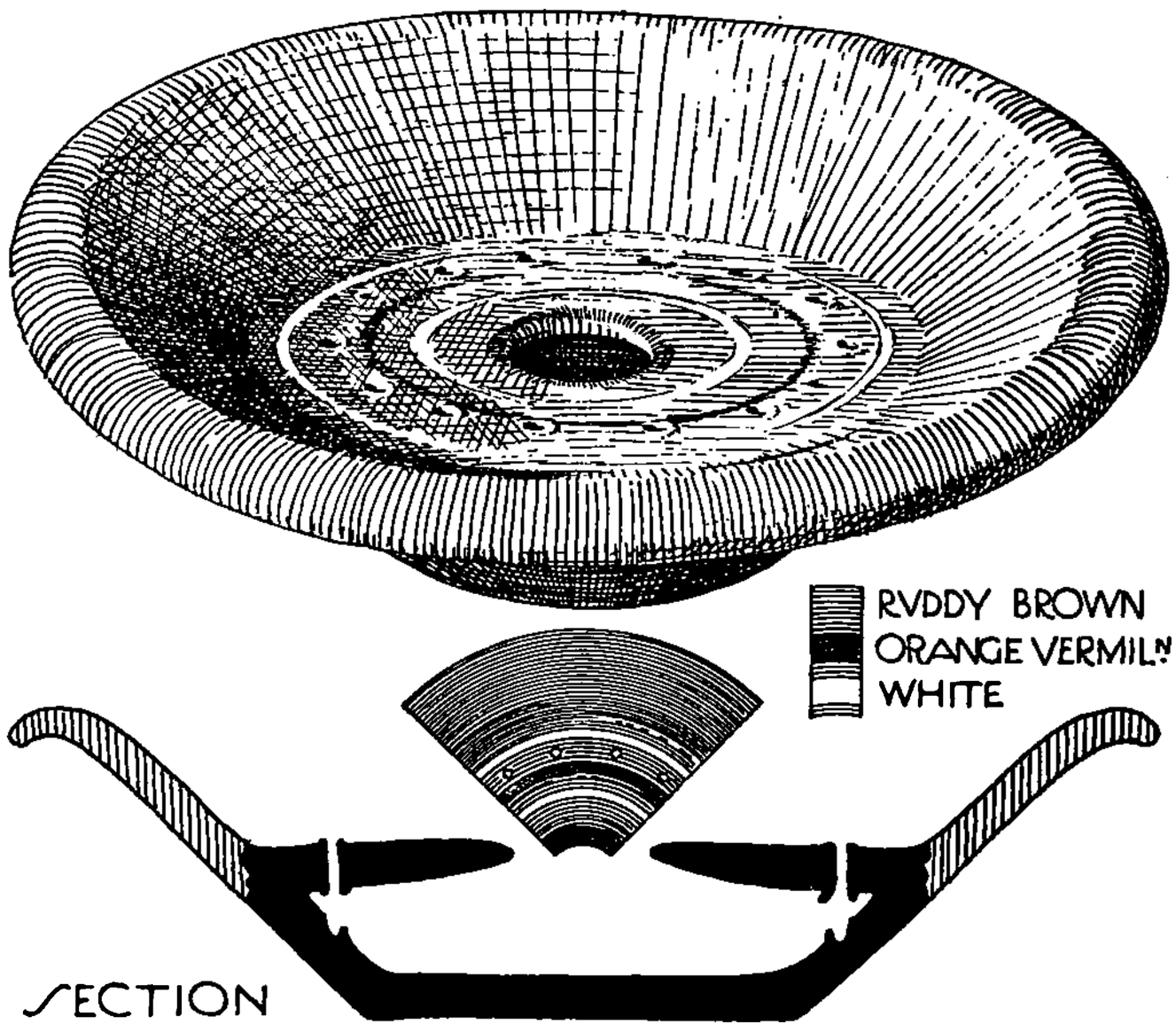


FIG. 44. RESTORED VIEW AND SECTION OF INCENSE BURNER.

Jar of unique construction.

Among the vessels from House B was a jar of quite unique construction; reproduced in Fig. 45, *a*, *b*, and of which a section is drawn in Fig. 45, *d*. It is 28·5 centimetres high, with a spouted rim 25 centimetres in diameter. From the interior of its outer wall, about 5 centimetres below its upper margin, there runs out a wide ledge leaving a circular opening, about ten centimetres wide, in the middle. By the spout (the border of which is here guarded by a ridge about 3 centimetres high), this ledge is plain, but the rest of its surface shows a number of smaller perforations.

What may have been the object of the complicated and evidently well-considered construction of this utensil? Our knowledge of the livelihood of the Ancient Cretans is still too imperfect to allow of any certain answer being given at this distance of time. The central aperture is just large enough for the convenient insertion of a man's hand, so that any coagulation in the interior due to the substances used could be completely cleared out That the opening itself was closed by a lid—not necessarily perforated—is also probable. It has been suggested [3] that grapes were crushed above

[1] This is Mr. Pendlebury's suggestion, *loc. cit.*

[2] See *op. cit.*, Fig. 7, top right.

[3] Pendlebury, *op. cit.*, p. 66, note. This ingenious suggestion was made by Madame Sp. Marinatos.

the diaphragm, consisting of the ledge and presumable lid, so that the juice would trickle through the perforations into the recipient below.

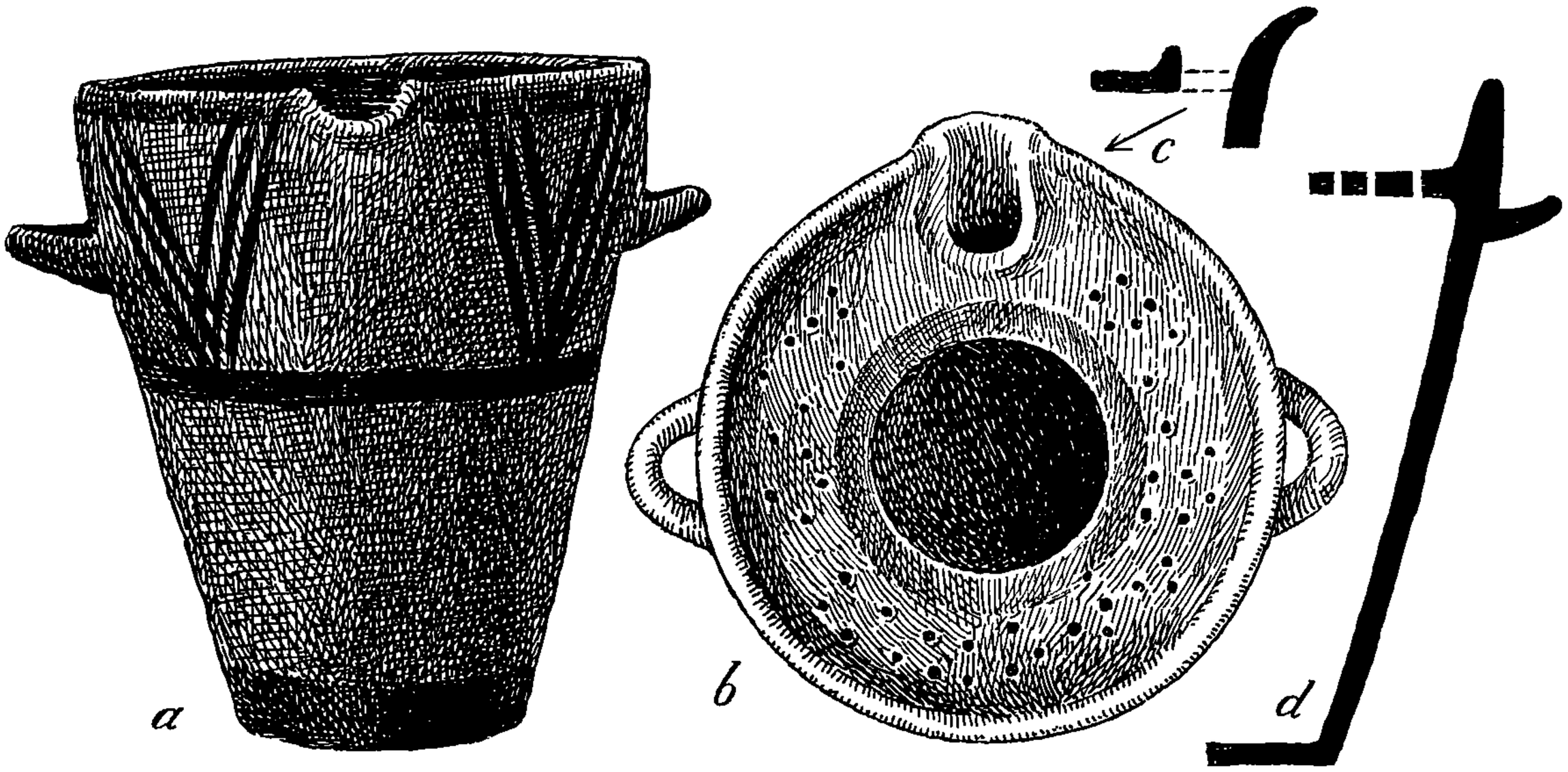


FIG. 45. VESSEL FOR STRAINING LIQUOR, PERHAPS GRAPE-JUICE: FROM M.M. I *a* HOUSE B.

Large store-jars.

Remains of several large store-jars were found in the Magazines of House B, one of which as reconstructed is given in Suppl. Pl. XLV.[1]

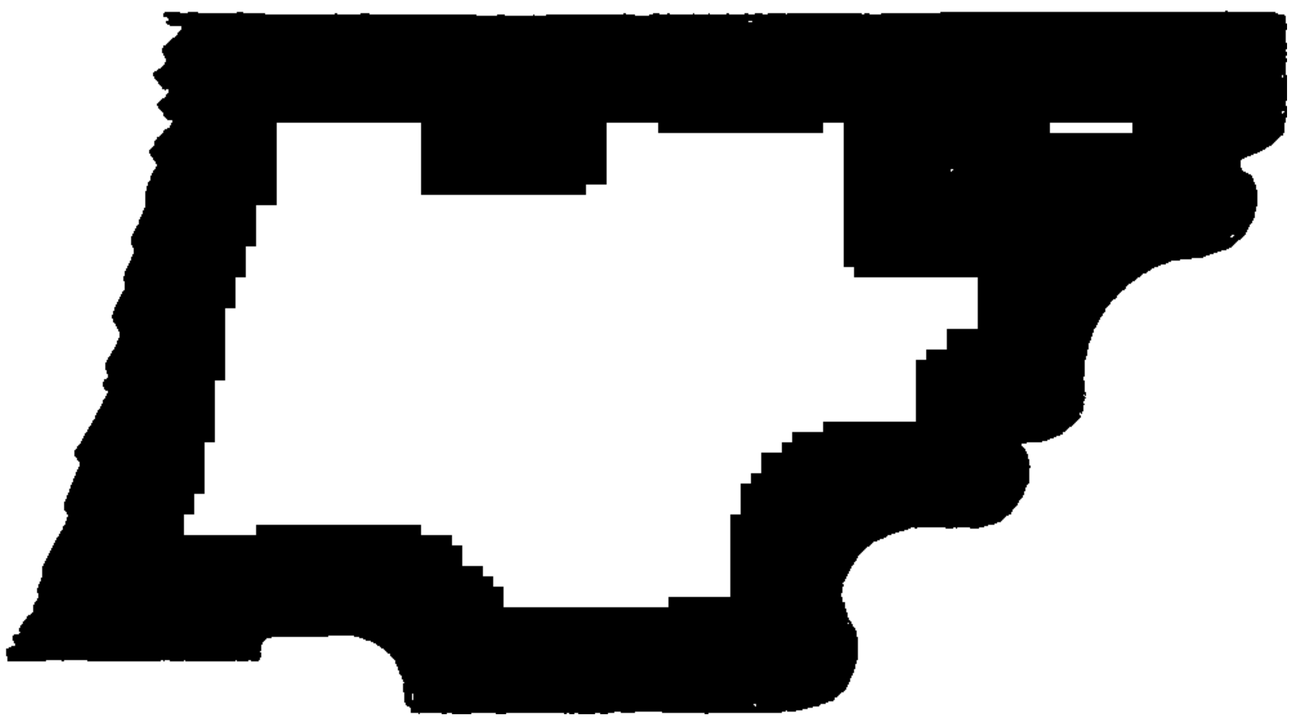


FIG. 46. SECTION OF PURPLE GYPSUM TABLE.

Amongst types of vessel connected with the kitchen or table, wholly or partly represented, were three-legged pipkins, frying pans with projecting handles, and the high-stemmed 'fruit stands', so frequent in the succeeding Age. A pedestal of one of these already showed incipient polychrome ornament.[1] Clay tables with low legs also occurred.

Part of stone table with architectonic moulding.

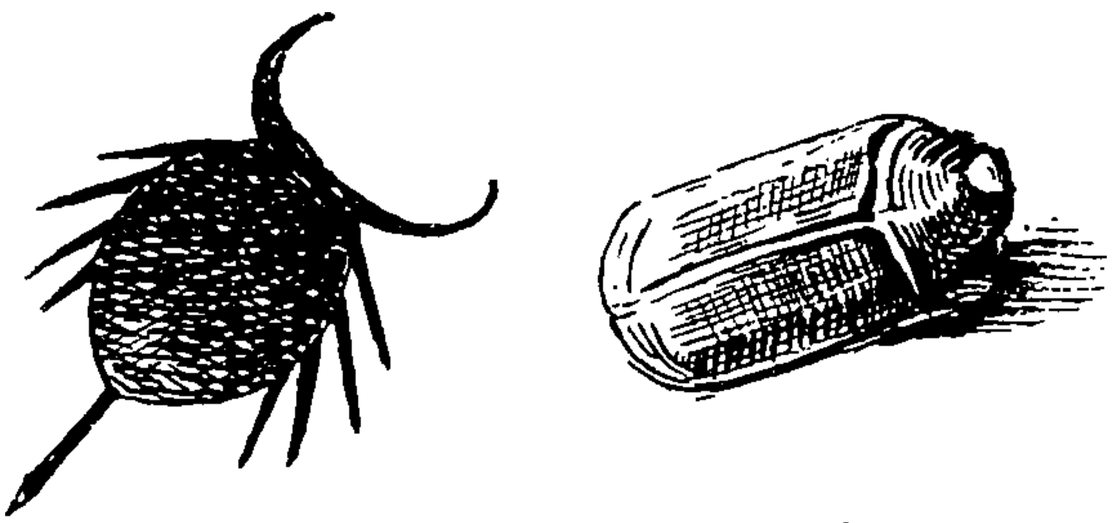
Of still greater interest was the discovery in the same house (B) of part of a circular table of purple gypsum, which, as seen from below, is given

[1] Part of another was found with orange-vermilion bands and cross-lines on a black ground. For coloured specimens of the pottery see *B.S.A.*, xxx, Pls. XIII, XIV, from Mrs. Pendlebury's drawings.

in Suppl. Pl. XLV B. Its profile (Fig. 46)[1] supplies the earliest example of a Min an moulding of architectonic type. The elegant form of this, with its curve. nd counter curves, set off by deep incisions, may in fact be considered to afford some anticipation of the more delicate mouldings of the cornices that L rder the 'triglyph' friezes of the last Middle Minoan Period, with their central relief bands sharply bordered by others showing similar soft curves in cavetto.[2] The table itself is of purple gypsum 3·8 centimetres thick and originally 1·06 metres in diameter. It is smooth above and rough below, with a circular ledge to support it about a centimetre high and 2·7 centimetres broad. Such a finely executed object in decorative stone may well have had a religious destination.

Incipient naturalism: higher Artistic Achievements of M. M. I *a* best illustrated by Mallia Discoveries.

This architectural fragment must be regarded as the best evidence that these newly discovered M. M. I *a* Houses have afforded as to the higher artistic achievements of this important Minoan phase which ushers in the Age of Palaces. These, as regards minor objects, are best illustrated at Knossos by the 'Vat Room Deposit' referred to below. Of naturalism in Art we have indeed a good example in a moulded cockle-shell from House B.[3] This tendency is also well brought out in the heron and notably the swimming beetle (Fig. 46 *bis*, *a*) on fragments from the Monolithic Pillar Crypt, to which may be added the moulded beetle on a M. M. II *a* handled bowl (Fig. 46 *bis*, *b*).[4] On an ivory half-cylinder, again,[5] a hunting scene showing a bowman with his dog, a tree, and a running wild goat are realistically rendered in a manner recalling the sculptural skill already attained by the Minoan lapidaries in E. M. II.[6]



a *b*

FIG. 46 *bis*. WATER-BEETLE ON M. M. I *a* VASES ($\frac{3}{5}$); *b*, BEETLE ON M. M. II *a* BOWL ($\frac{3}{2}$).

[1] From a sketch by Monsieur E. Gilliéron, fils.

[2] Cf. *P. of M.*, ii, Pt. II, p. 596 seqq.

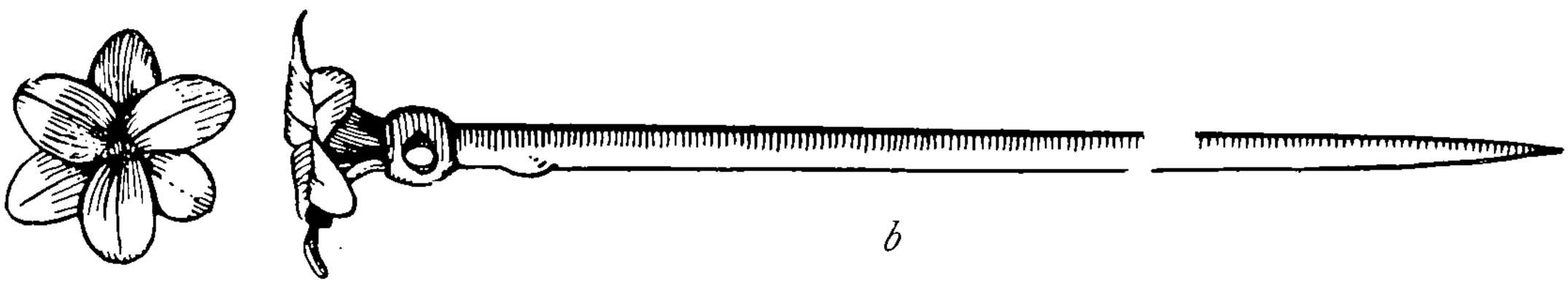
[3] See below, p. 108, Fig. 75.

[4] See below, p. 85, and cf. *P. of M.*, i, pp. 182, 183, and Fig. 132, &c.

[5] *Op. cit.*, p. 197, Fig. 145: found by a peasant West of Knossos.

[6] *Ib.*, pp. 93, 94, and Fig. 62 (steatite lid with crouched dog: Seager, *Mochlos*, p. 70, Fig. 39).

The leaves and flowers so deftly wrought by the Minoan goldsmiths of that Early Minoan epoch, and which themselves may well have stood in



a *b*

FIG. 47. GOLD PIN FROM MALLIA ($\frac{3}{2}$).

some distant relation to those that decked the head-dress of Sumerian queens of Ur,[1] have now found a more finely wrought M. M. I *a* successor in the exquisite gold pin with an amaryllis-like flower, recently brought to light by the French excavators at Mallia (Fig. 47).

It is to this locality, indeed, where a M. M. I *a* Palace has been preserved in remarkable entirety, that we are constrained to turn for the highest artistic products of this cultural phase. All previous examples of Minoan gold ornaments have been now surpassed by the pendant, found with the pin, which—though combining features, *more Minoico*, of other *hymenoptera*—was probably intended to represent bees, two symmetrically grouped with a ball and granulated disk, perhaps a honey cake, between them, while another gold ball is enclosed within a kind of miniature cage above (Fig. 48).[2] The

FIG. 48. JEWEL WITH BEES OR HORNETS, SYMMETRICALLY GROUPED (MALLIA) ($\frac{3}{2}$).

[1] C. Leonard Woolley, *Ur Excavations*: Vol. ii, *The Royal Cemetery*, Pl. 129, &c.

[2] I owe the illustration of these two relics to the courtesy of Monsieur Pierre de Margne,

minute granulation on the disk exceeds that of the XIIth Dynasty Egyptian jewellery of the Treasure of Dahshur. Equally microscopic decoration is seen on the golden bead in the shape of a toad of contemporary M. M. I *a* date from the early tholos ossuary (B) at Kumasa[1] and recurs on the miniature golden lion found by the stairs of the Long Corridor at Knossos.[2] In the case of this later jewel the place of finding associated it with the 'Hieroglyphic Deposit' which would date it rather to the succeeding M. M. II Period.

Acropolis Houses North of 'Koulouras'.

Acropolis Houses N. of 'Koulouras'.

North of the line of the Koulouras the outer enceinte wall enclosed a closely set conglomeration of houses, in their later shape dating from the very beginning of the late Minoan Age, and practically corresponding in their duration with that of the later Palace. On the borders of the North-West Treasury, however, was a walled interval containing a mass of pot-sherds, covering the whole of the Second Middle Minoan Period, and among them polychome fragments in the finest style. The deposit went farther back indeed than those of the 'Koulouras', since it included remains of the initial phase of that Period—M. M. I *b*—only scantily represented by them.

Room with utensils for domestic snake-cult.

The late Minoan structures here to a certain extent intruded on the line of the old enceinte wall, parts of two houses having been obviously continued West of it. One of these was associated with what had clearly been a 'lustral basin', though the steps leading down to it had been destroyed. In two places were found remains of great painted amphoras of the late 'Palace Style', but the most remarkable discovery in this region was a room of a private house, belonging to the same L. M. II Period, containing a complete set of utensils—some of them coiled round with serpents moulded in clay—designed for a domestic snake cult of a type more primitive than that in which it was taken over by the Minoan Goddess as Lady of the Underworld.[3] A special Section (§ 94) is devoted to this hitherto unparalleled discovery which throws new light on the most primitive stratum of Minoan cult.

It will be seen that the outer enceinte line, of which we have now the evidence to the West of the building, was laid out so to enclose something more than the Palace area itself. It must in fact be also regarded as an

who, with Monsieur Fernand Chapouthier conducted the excavations at Mallia in 1930. Both the pin and the pendant are now published by Monsieur de Margne in his excellent article, *Bijoux Minoens de Mallia* (*B. C. H.*, liv, 1930, pp. 404–21 and Pls. XVII–XIX). He cites valuable comparisons on the Syrian side of the Age of Hammurabi (pp. 220, 221).

[1] Xanthudides, *Vaulted Tombs of Mesará* (trans. Droop), p. 29 and Pl. IV, 386.

[2] *P. of M.*, iii, p. 412, Fig 275 A, and see notes 2–4.

[3] See below, p. 138 seqq.

Acrop[illegible]vall, surrounding, besides the residential quarters of the Priest-kin[illegible] congeries of smaller houses that originally clustered round it like the hovels often seen clinging to the skirts of medieval Cathedrals.

Proto-Palatial Date of Outer Enceinte Wall: its Northern Extension and Fortificatory Function.

Date of Outer Enceinte Wall: Proto-Palatial.

That, however much restored in places or rebuilt in its upper courses, this outer walling goes back at least to the initial phase of the Middle Minoan Age, is rendered clear by several converging lines of evidence. Its Northern Section—assuming that the remains of the old boundary wall West of the 'Theatral Area' must be identified as its continuation—stands, as we have seen, clearly in relation with a North-West Court of M. M. I *a* date, underlying that dated from M. M. II. On its Western side it cuts through a part of an M. M. I *a* House in such a way as to lead to the conclusion that it was itself constructed at the date of its later phase.

It is true that the section beyond and the ramp of the roadway that proceeds from it show many signs of later interference, but the causeways that converge on its upper terrace, and which are clearly of contemporary origin with it, date back to the proto-palatial Age. The broader of the two, indeed, that runs straight to this line had passed under the façade wall of the 'historic' Palace.

So, too, the Eastern turn of the old outer Enceinte finds, as we have seen, its continuation in the lower courses of a massive wall, abutting on the outer line of the existing West Porch, which was entirely neglected in the later structural arrangements. Blocks of this wall bear incised signs of the exceptional dimensions that characterize the 'proto-palatial' work.

Making an approximate allowance for the missing section of the outer enceinte wall by the North-West Treasury House, its total length along the West borders of the site from the outer line of the later 'West Porch' to the point reached by it to the North-West of the 'Theatral Area' where it formed the boundary of proto-palatial North-West Court, is about 140 metres, or some 455 feet.

Extension along West Section of Northern border.

The outer wall at this point was traced a good two metres North of the line formed by the Northern wall of the later constituted 'Theatral Area'. The remains here break off, but it was hard to avoid the conclusion that at or near this point the old Enceinte Wall took a turn Eastwards, heading thus towards the known exterior lines of the Palace system by the Northern Entrance. In this way it would have formed the North border

of this Early North-West Court, the stratigraphical evidence for which has been so clearly ascertained. This presumed North Enceinte Wall had, as we have seen, an inner line forming the Southern boundary of this early Court and running under the steps and bastion on that side of the 'Theatral Area' (see Diagrammatic Plan, Fig. 30).

Fortificatory character of Enceinte.

Like the Northern Entrance System itself and the 'Early Keep', the massive lines of earlier walling, the continuation of which is traceable along the Eastern and Southern slopes, had from the first suggested a fortificatory intention[1] on the part of the Palace builders. The Western Enceinte now brought to light greatly strengthens this impression.

On the other hand, the easy and direct approach by the paved way leading to the 'Theatral Area'—which was itself designed rather for ceremonial reception—and, in particular, the apparently quite open character of the front of the spacious 'West Porch' had carried with them the conclusion that, in the later days at least of the building, access to it on its naturally most exposed side was free from any defensive barriers.

Nor was the explanation far to seek. In the great days of the Palace its real protection lay doubtless in the 'Wooden Walls' of the Minoan fleet. It is probable indeed that by this time Knossos occupied an unchallengeable position of superiority in the Island.

The present discovery that in the earliest phase of the building the open gap was filled by an outer line of Enceinte Wall is, in fact, quite compatible with this conclusion. It seems probable, indeed, that the position of Knossos as regards the other Island centres was not in those days by any means of such predominance as was later attained by its Priest-kings. Not to speak of Phaestos on the South, there stood, at no great distance on the same Northern shore, the massive pile of Mallia, specially flourishing in the 'proto-palatial' epoch of Knossos. Aggression from the hinterland might still be feared, and we may infer that, as at a later time in the case of the Greek cities of Crete, each local centre provided itself with a fortified enceinte against its neighbours. The peak settlement of Juktas was itself enclosed by a ring-wall of rough construction, the sherds found in the crevices of which show that it dated from the same M. M. I *a* Period that saw the erection of the line of outer enceinte at Knossos described above. Sufficient evidence exists of the general practice of fortification on Aegean sites of still earlier times, witness the walls of Phylakopì in Melos,[2] of Khalandrianì in Syros, and of St. Andreas in Siphnos.

Early Cretan and Aegean Fortification.

[1] See *P. of M.*, i, p. 141, and Vol. III, pp. 6 and 262–3.

[2] See especially Dr. Mackenzie, *Phylakopì*, pp. 235–8.

Supplement to § 92: Note on the M. M. I *a* Pottery from the Newly Discovered Houses A and B.

Mass of M M. I *a* pottery in houses beneath 'Koulouras'.

The early Houses A and B brought to light beneath the two newly discovered 'Koulouras' have produced a real 'Corpus' of materials for the whole history of the M. M. I *a* ceramic stage[1] from its earliest transitional beginnings to its very latest phase when polychromy was becoming general, and it merges in the M. M. I *b* style.

Some of the most remarkable of the domestic utensils, including the jar with the perforated ledge, have already been described in connexion with House B. As already noted, the contents of both houses illustrated, as a whole, the same ceramic phase.

Among types that more specially represent the latest Early Minoan tradition, in which a dark ground is more usually coupled with white decoration where festoons and arches play a part, may be noted the cup (Fig. 53, 6), with the slightly downward curving lines below the rim, and others diagonally set in its circumference. The 'butterfly' pattern of the jug (Fig. 50, 19), with its cross-hatching, itself goes back to E. M. II.[2] The early type of bridge-spouted pot (Fig. 50, 16), with the exaggeratedly projecting mouth, fits on, as has been already shown, to a very old Early Minoan class in which we may trace the suggestion of proto-dynastic Egyptian copper vessels.[3]

The 'Askos' or Wine-skin Type and its Aegean and Troadic Diffusion: Theriomorphic Features.

The *askos* or wine-skin type in burnished red clay (Fig. 49 A) found in House B calls for a few observations. It belongs to a family of wide East Mediterranean distribution—extending indeed to primitive Italy and to the Thracian lands North of the Aegean. Its known range includes a considerable area of Western Anatolia, and it was at home betimes in the South Aegean Islands and the Morea. The upper part of a slightly later example, in the painted barbotine style of the beginning of M. M. I *b*,

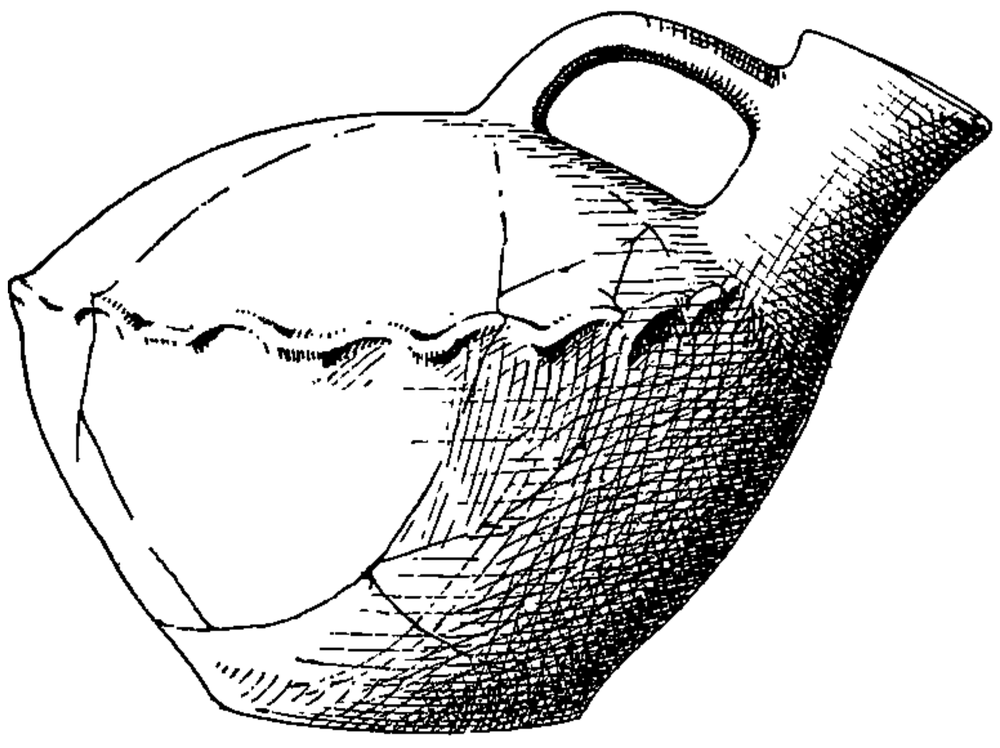


FIG. 49 A. M. M. I *a* *ASKOS* FROM HOUSE B.

[1] For a more detailed account of these M. M. I *a* sherds I must again refer to Mr. and Mrs. John Pendlebury's paper in *B.S.A.*

[2] A good example of this pattern is seen on the round disk from Mochlos (Seager, p. 36, Fig. B (II. 1).

[3] Cf. *P. of M.*, i, p. 166, and Fig. 117.

is given in the Coloured Plate XXVIII, A. Of its early use in Crete the most complete evidence is supplied by a steatite bead-seal[1] of a primitive class—one of a series of potters' signets, of E. M. II–III date—while a part of an actual vessel of this shape was brought out at Palaikastro, in that case beneath an E. M. II deposit.[2] A variety with a very large neck and mouth,[3] found at Kumasa and Pyrgos, presents Early Helladic affinities.[4] An *askos* of a miniature votive form[5] occurred, as a survival, in the 'Temple Tomb' of Knossos itself; and the type recurs among the 'Mycenaean' pots of Volo.

It is noteworthy, however, that the pure *askos* type is comparatively rare among the relics—well represented as they are—of the Early Minoan Age in Crete. A specimen, indeed, occurred in the early Sepulchral Cave of Pyrgos[6] provided with three short supports or legs. This latter feature was also shared by what may be called a freak variation of the type in the grotesque vessel, from the tholos tomb of Kumasa, in the form of a young bird with open beak, which had four short legs.[7] So, too, a ring-shaped form of *askos*, of miniature dimensions—one only 9 centimetres long—from the same tomb, with a plain expanding mouth, is supported by three similar legs.[8] In these legged types we seem to trace the reaction of a well-known class of theriomorphic *askoi*, widely diffused on the further shores of the Aegean, which must, indeed, typologically be regarded as representing the parent form.

In the Cyclades, on the contrary, though the legged types were also known, there is abundant evidence of the persistence of the simple flat-

[1] A. E., *Primitive Pictographs, &c.*, (*J. H.S.* xiv, 1894), p. 332, Fig. 52 *a*.

[2] R. M. Dawkins, *Palaikastro Excavations*, Suppl., Pt. I, p. 4, Fig. 1. Only the handle and its two attachments, including part of the mouth, are preserved.

[3] Xanthudides, *Vaulted Tombs of Mesarà*, Pl. XXIX, No. 4152, and cf. p. 41. Cf. the note (3) by Prof. J. P. Droop.

[4] Cf. A. J. B. Wace and C. W. Blegen, *The Pre-Mycenaean Pottery of the Mainland*, *B.S.A.*, xxii, Pl. VI, 1 (see p. 177). For the handle of a similar vessel see Blegen, *Korakou*, p. 7, Fig. 7. Several *askoi* were found at the neighbouring sites of Yirizi and Gonia.

[5] It had a dark grey surface.

[6] Ἀρχ. Δελτ., 1918, p. 145, Fig. 6, No. 23.

[7] Xanthudides, *Vaulted Tombs of Mesarà* (ed. Droop), Pl. XXVIII, No. 4121, and cf. *P. of M.*, i, p. 116, Fig. 85; and three short legs (*ibid.*, Pl. XXIX, No. 4120). The bird vase finds a certain parallel in a specimen from Kodjadermen in N.E. Bulgaria in the form of a four-footed animal with open mouth. It is ascribed to the local 'Neolithic'—whatever that means (*Jahrb. d. k. d. Inst.*, 1915, *Anzeiger*, p. 219, Fig. 2).

[8] Xanthudides, *op. cit.*, Pl. XXIX, No. 4120. *Askoi* with the body in the shape of a hollow ring supported by short legs were also known in Melos (cf. *Phylakopi*, Pl. IV, 9), and they reappear among the characteristic Copper Age types of Cyprus (e. g. Ohnefalsch-Richter, *Kypros*, Pl. CLXX; Tomb 9, Hagia Paraskevì).

bottomed form—often presenting a decorative reminiscence of the fact that the domed upper part had been moulded on in a separate piece.[1] The well-known 'duck-vases'—*πάπιαις*[2]—of Phylakopi belong to this class, and in Melos and the Cyclades generally the type played a much more important part in ceramic evolution. There is, in fact, a continuous series of 'askoid'

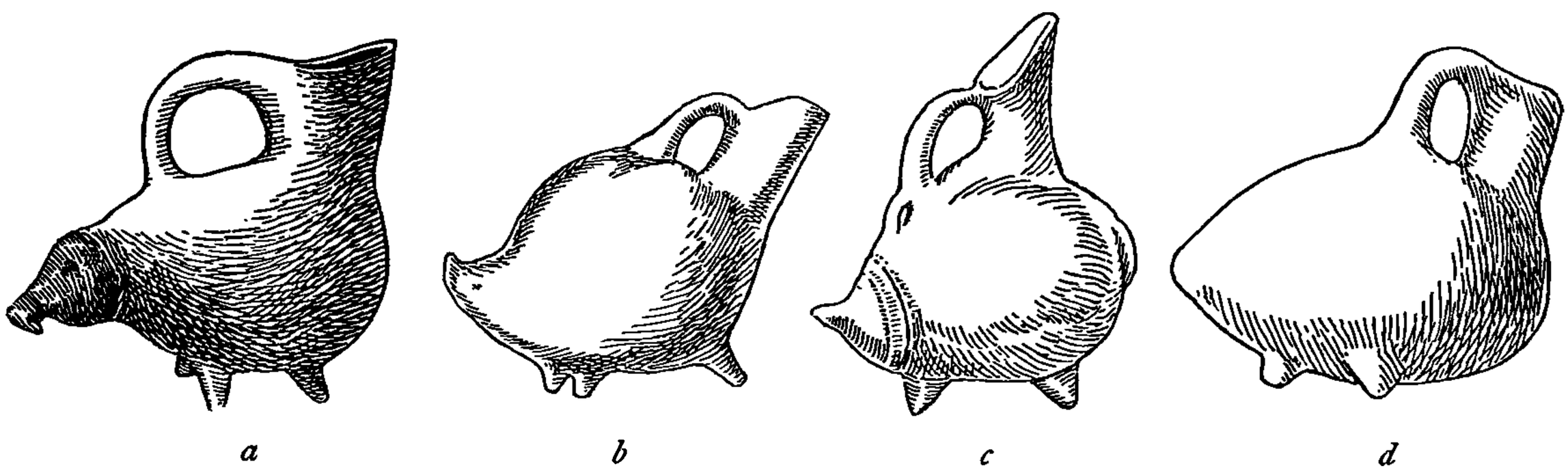


FIG. 49 B. COMPARATIVE TABLE OF 'ASKOS' VASES OF TROJAN PIG-SHAPED TYPE.

vessels from Early Cycladic times onwards to the days of the 'bird vases' that occur as imported objects in the Mycenae Shaft Graves and in the 'Temple Repositories'. Some reflect the crocus decoration of L. M. I *a*.[3]

In the earlier form of *askos*, as seen at Hissarlik, with three or four legs, the skin of a pig is clearly imitated with the head and snout at the posterior end (Fig. 49 B, *a*).[4] The snouty end of this is gradually simplified into a mere projection or protuberance (Fig. 49 B, *b*, *c*, *d*),[5] and the diffusion of this secondary type is illustrated by a miniature example found, with other diminutive vessels—apparently of a votive class—in the neighbourhood of Thyatira.[6]

The porcine descent of the legged, knob-ended type of *askos* on the Anatolian side can hardly be gainsaid. The flat bottom of the Knossian specimen belongs, however, to the Southern and Western area.

[1] This is well shown by a specimen from Amorgos (Dümmler, *Ath. Mitth.*, 1886, *Beilage*, 2. 1) now in the Ashmolean Museum. Cf., too, E. J. Forsdyke, *B.M. Cat.*, *Preh. Aegean Pottery*, p. 59, Fig. 68 (A 330). Dümmler (*loc. cit.*, p. 23) regards the incised lines as a record of a movable cover, which however seems to be foreign to the associations of a skin type. It is rather a record of the method by which the vessel was roofed over.

[2] C. C. Edgar, in *Phylakopi*, pp. 88, 89, &c., and Pl. IV, 6, 8.

[3] Cf. *Phylakopi*, Pl. XXIII, Fig. 5, and pp. 126–8, Figs. 96, 97.

[4] Fig. *a*, Schliemann, *Ilios*, p. 377, Fig. 338; *b*, *ibid.*, p. 376, Fig. 335.

[5] Doerpfeld, *Troja und Ilion* : *b*, *Beilage* 36, opp. p. 272; *c*, p. 273, Fig. 162.

[6] H. A. Ormerod, *Prehistoric Remains in South Western Asia Minor* (*B. S. A.*, xix, p. 56, Fig. 4, *a*, in the Ashmolean Museum).

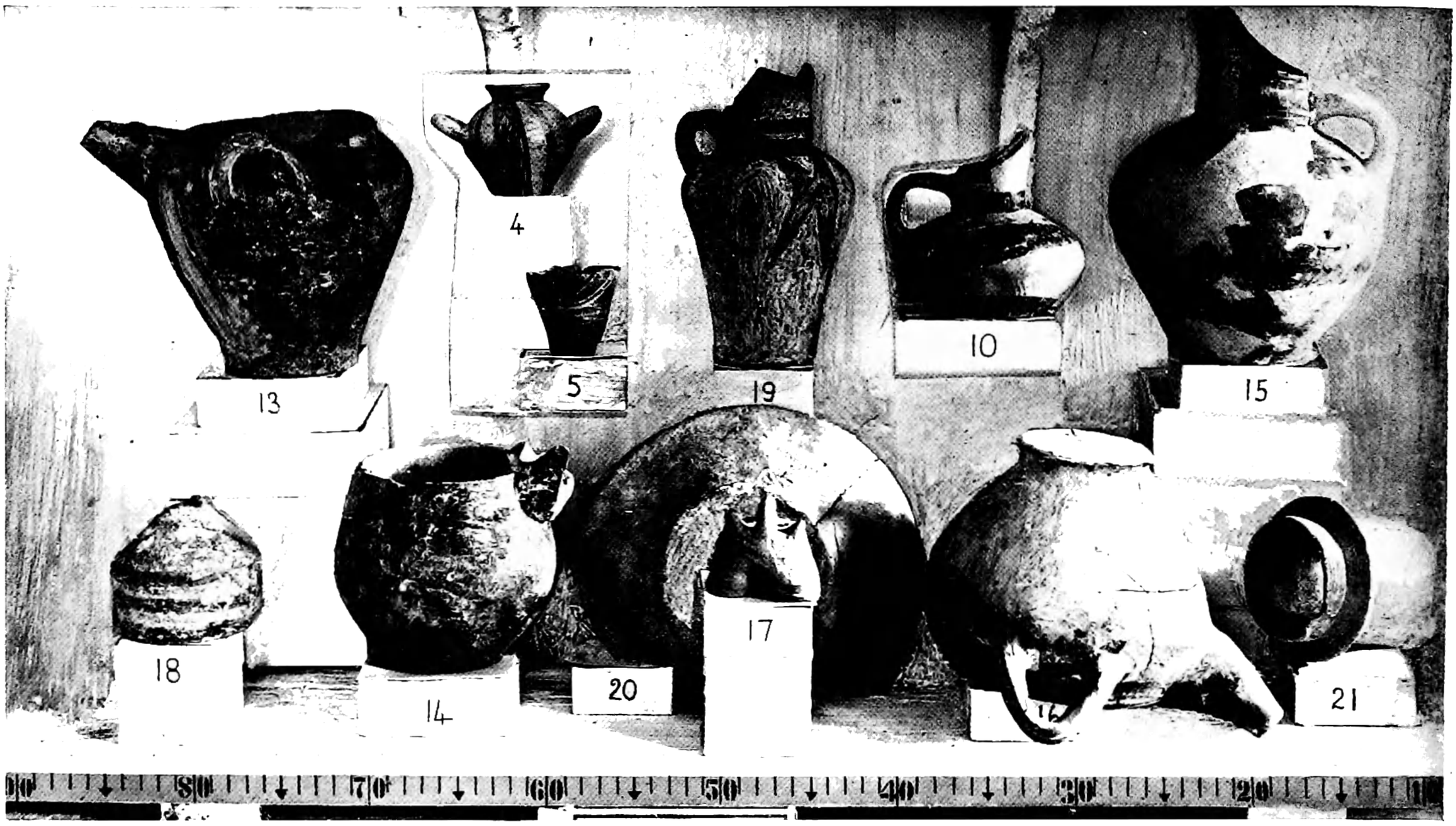


FIG. 50. M. M. I *a* POTTERY FROM HOUSES A AND B, BENEATH 'KOULOURAS'.

The incised chalk-filled pattern of the cup (Fig. 53, 1), from the early stratum of the same House B, and that of the jug (Fig. 53, 2) revive interesting questions as to the survival of Neolithic traditions in ornament.

General Characteristics of the Pottery from the 'Kouloura' Houses and Parallel Deposits.

Typical vessels from M. M. I *a* Houses.

A good general idea of the contents of the newly discovered houses may be gathered from the vessels illustrated here in Figs. 50, 51, and the selection given in Fig. 53. Many kinds of cup forms occur, including small tumblers, some with expanding sides, egg-cup shaped types with flat stands, and others, of which the specimens found here were fragmentary, of a 'wine-glass' type, with more funnel-shaped receptacles rising from a similar base.[1] To this must be added, moreover, the handled class of more or less hemispherical form with a plain clay surface. With these were clay trays with raised rims, pipkins,[2] saucers and platters, and, in addition to the larger *pithoi* or store jugs,[3] a great variety of smaller jugs, often spouted, including the remarkable example Fig. 45.

[1] Compare polychrome cup from the 'Vat-Room Deposit', *P. of M.*, i, p. 169, Fig. 120.

[2] See above, p. 73. [3] *Ib.*

FIG. 51. M. M. I *a* POTTERY FROM HOUSES A AND B, BENEATH 'KOULOURAS'.

The earlier Minoan, and still more remote connexions of the somewhat long-spouted type of jug, Fig. 50, 16, have been already referred to. The form illustrated in Fig. 51, 18 and Fig. 53, 7, which approaches the proportions of the normal 'hole-spouted' Middle Minoan class is interesting, like the cup, Fig. 53, 6, as it preserves the E. M. III tradition of white ornaments on a black ground.

A characteristic type of two-handled jar (Fig. 52)[1] lives on in an elongated and attenuated form to the last Middle Minoan Period; a specimen from the earlier phase of which—M. M.

[1] This jar is 55 cm. high.

FIG. 52. TYPICAL TWO-HANDLED JAR.

III *a*—from a basement of the S.W. Palace region bore a graffito inscription of the Linear Class A. But the most recurrent of all the domestic vessels here seen is the pitcher with comparatively broad neck and raised beak

FIG. 53. SELECTION OF M. M. I *a* POTTERY FROM HOUSES A AND B, BENEATH 'KOULOURAS.'

cut short above.[1] It represents a traditional form, going back to the very beginning of the Early Minoan Age,[2] and associated in the case of Fig. 50, 19, with the 'butterfly' decoration of equal antiquity. The most remarkable example from the present deposit was the jug in the earliest polychrome technique[3] showing a cruciform pattern within a disk[4] (Fig. 53, 9).

[1] See Fig. 50, 10, 15; Fig. 51, 13, 14, 21, 27; Fig. 53, 2, 9.

[2] E. g., *ib.*, i, p. 62, Fig. 26 (E. M. I painted jug from rock-shelter, Gournià). Its decoration is already of the hatched 'butterfly class'.

[3] A coloured reproduction of this is given by Pendlebury, *B. S. A.* XXX, Pl. XIII.

[4] See below, p. 94, Fig. 61.

Parallel deposits.

The whole facies of the domestic pottery found in these newly discovered houses, with its prevailing sepia on buff decoration, recalls that of a series of considerable deposits of contemporary date found in or near the Palace site. Amongst these one of the most prolific sources had been the early Well near the 'Court of the Stone Spout'. An identical phase also occurred beneath the floors of the First and Third West Magazines[1] and in the 'Vat Room Deposit',[2] though the latter contained ingredients of a choicer kind[3] and was rich in ceramic remains answering to the lower stratum of House B. It is also to be noted that the fine egg-shell ware of this epoch was not found in the two houses. Its best chance of survival seems to have been when placed in a special receptacle, like the small 'tumblers' (see Fig. 63) of Magazine I, which were found inside a jar.

A phase parallel to the above was also represented by the earlier stratum brought to light in the 'Basement of the Monolithic Pillars' where an incipient naturalistic tendency of the sepia on buff decoration was for the first time revealed by the fragments above referred to depicting a heron, parts of wild goats, and a water-beetle.[4]

But perhaps the closest resemblance to the M. M. I *a* pottery of Houses A and B was presented by that found on the floor of a contemporary building about nine metres North of the first discovered 'Kouloura', which must certainly be regarded as having formed part of the same group of houses.[5] In this was found the remarkable early polychrome ewer with the double axe-like patterns.[6] The M. M. I *a* structure to which this floor deposit belonged may here be conveniently referred to as 'House C'.

Geometrical polychrome designs.

In one interesting category, indeed, the floors of Houses A and B afforded a better accumulation of evidence than the other parallel deposits. This was owing to the comparative frequency of sherds from the upper

[1] *P. of M.*, i, p. 172. For the deposit beneath the First Magazine, see, too, *Knossos, Report*, 1901 (*B. S. A.*, vii), p. 48; for that under Magazine II, see *Ibid.*, 1900 (*B. S. A.*, vi), p. 21.

[2] *Ib.*, p. 165, seqq.

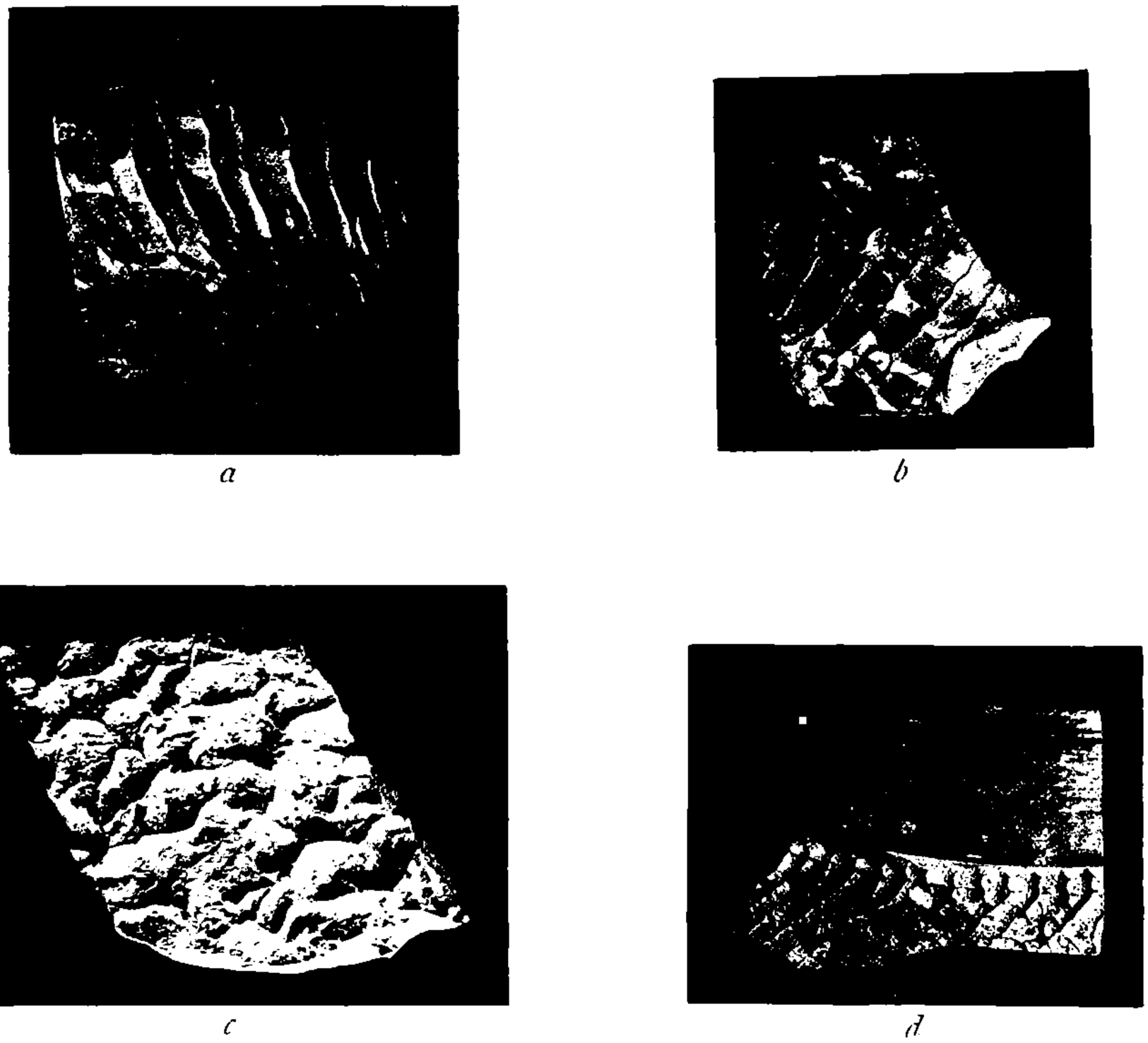
[3] The good, though simple, polychromy visible on the 'wine-glass' cups found there seems to show that the 'Vat Room Deposit' contained some elements belonging to the closing phase of M. M. I *a* as well as its earlier contents.

[4] See above, p. 74, Fig. 46 *bis*, *a*, and *P. of M.*, i, pp. 182, 183, and Fig. 132, and cf. D. Mackenzie, *The Middle Minoan Pottery of Knossos*, *J. H. S.*, xxvi (1905), Pl. IX, and cf. pp. 246, 247.

[5] *P. of M.*, i, pp 172–5, and Fig. 123, *a*. There were numerous clay 'sheep-bells' like Fig. 50, 17 in this deposit. Owing to the earlier surface (here E. M. III) having been higher than in the case of Houses A and B, the depth of the floor level beneath that of the West Court was little more than a metre and a half.

[6] A coloured reproduction of this is given in A. E., *Knossos Report*, 1905, *B. S. A.*, xi, Pl. I.

part of the deposits exhibiting polychrome designs of an early class, and of simple geometrical forms in orange, vermilion, and white on a red ground.[1] In other respects the latest elements in this group of deposits



a *b* *c* *d*

FIG 54. INCIPIENT BARBOTINE AND 'BARNACLE' WORK FROM M. M. I *a* HOUSES A AND B, BENEATH 'KOULOURAS'.

illustrate the beginnings of polychromy in varied aspects, and often with a black glaze ground.[2] Many examples of this. occurred in the early stratum of the 'Basement of the Monolithic Pillars' and amongst them the 'Dove Vase'.[3] This vessel, with its orange, vermilion, and creamy

Dove Vase.

[1] See on this, Mr. and Mrs. John Pendlebury, *op. cit.*, *B. S. A.*, xxx, and the Coloured Plate XIV from drawings by Mrs. Pendlebury.

[2] See especially D. Mackenzie, *The Middle Minoan Pottery of Knossos* (*J. H. S.*, xxvi, 1906), pp. 244 seqq., and Pl. VII, and compare his article on *The Pottery of Knossos* (*ibid.*, xxiii, 1903; see p. 171 seqq., and Pl. VI, 1, 2).

[3] *P. of M.*, i, p. 146, Fig. 107, and cp. D. G. Hogarth and F. B. Welch, *Primitive Painted Pottery in Crete* (*J. H. S.*, xxi, 1901, pp. 78, 79, and Fig. 1). This. as Mackenzie points out (*J. H. S.*, xxvi, p. 246), really came from the M. M. I *a* stratum of the 'Room of the Monolithic Pillars'. It has white and vermilion bands on a black glaze ground.

white stripes on the dark ground, is in some respects the successor of the grotesque young bird of the preceding Period. It is 'askoid' in type and has no obvious connexion with the stone bird vases that range from prehistoric Egypt to Susa and Palestine.[1]

Appearance of Barbotine decorations.

Among the latest M. M. I *a* elements there now also begin to appear examples of a new class of decoration in relief to which the name 'barbotine' has been applied, and regarding the sources of which more will be said in the succeeding Section. Early specimens of this came to light in Houses A and B, including both the 'barnacle work' illustrated below,[2] and a flatter modification of it (Fig. 54, *c*). It is interesting to observe that the immediate outgrowth of this form of barbotine ornament appears on the fine example of a polychrome jug from a House floor South of the Palace[3] (Coloured Pl. XXVIII, *a*).

Several examples of a more delicate form of this technique consisting of fine ridges also occurred in this same M. M. I *a* association (Fig. 54, *a*, *b*, *d*) as well as the class showing groups of small knobs or points.

The combination of the 'barbotine' or 'prickle ware' with polychromy is very characteristic of the M. M. I *b* ceramic style, regarding which some new particulars are given in the succeeding Section. The concordant evidence of the deposits already referred to, however, and of some other similarly dated finds, shows that a considerable advance in polychrome design, often accompanied with barbotine technique, had been attained by the closing phase of M. M. I *a* conveniently delimited by the great architectural revolution marked by the building of the existing Palace. The earliest M. M. I ceramic class is exclusively associated with 'proto-palatial' structures.

Neolithic Traditions in Early Polychrome Patterns.

Neolithic Traditions in decorative design.

Among the polychrome sherds from Knossos belonging to this M. M. I *a* style a very primitive tradition in design is represented by fragments presenting vandyke and dotted patterns in orange-vermilion, and creamy white on a black glaze ground.[4] Fig. 55 shows a white pattern of the kind on a madder and vermilion ground.

[1] See H. Frankfort, *Studies in Early Pottery in the Near East*, i, pp. 73 and 74, and Pl. IX.

[2] See below, p. 102, Figs. 67, 68.

[3] *J. H. S.*, xxi (in colours) (1901), Pl. VI, *a*. Cf. *P. of M.*, i, pp. 179, 180, and Fig. 128.

[4] See *P. of M.*, i, p. 176, Fig. 125, 5, 6, 7 (here reproduced in Fig. 56).

The double-axe-like designs of the remarkable jug from House C are set in the same way with white dots, and this recurring form of decoration cannot but suggest the punctuated chalk-filled decoration of primitive technique, such as is seen in the comparative examples shown in Fig. 56, 1–4.

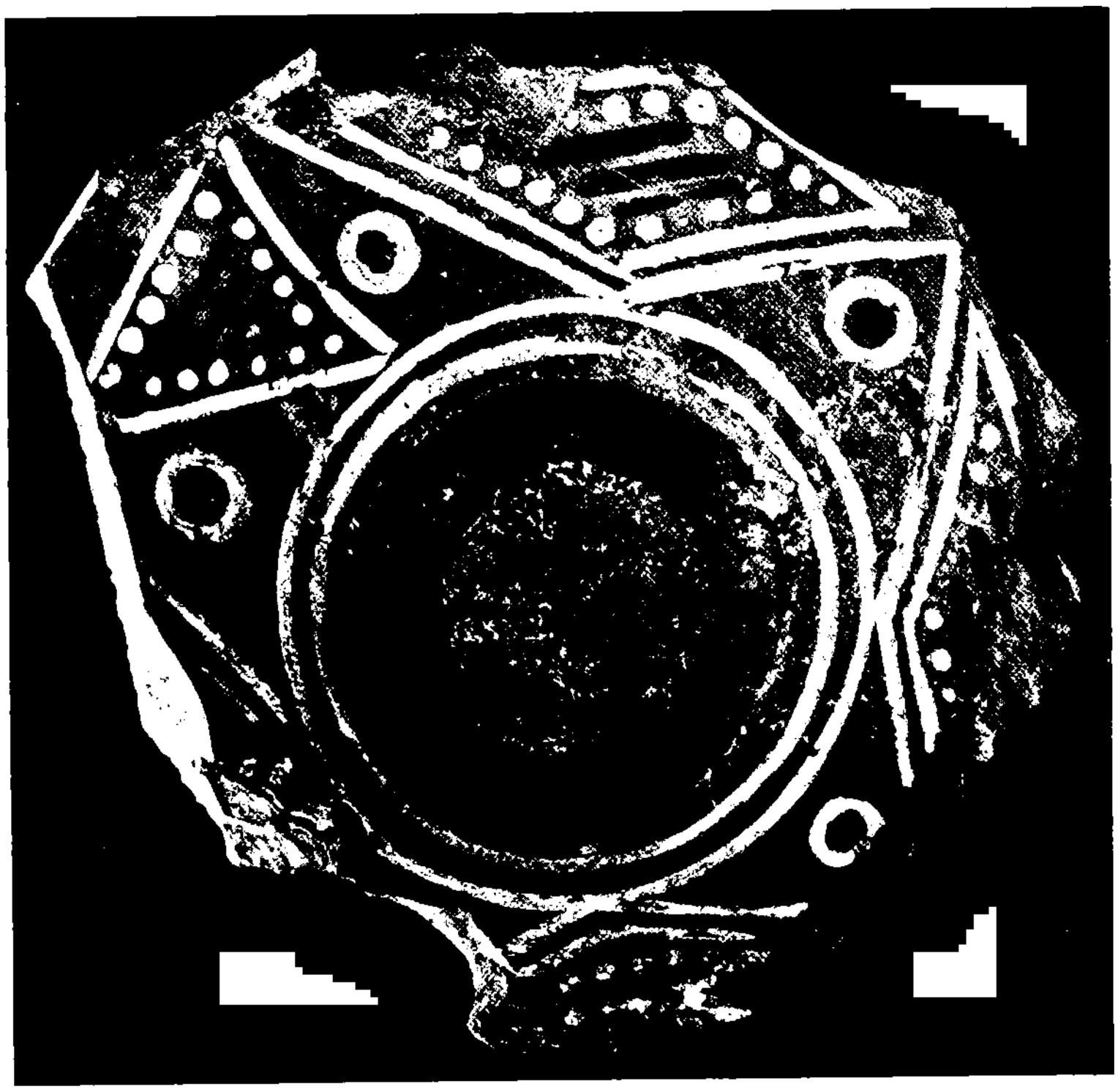


FIG. 55. PAINTED M. M. I *a* SHERD FROM HOUSE, BENEATH 'KOULOURA' ($\frac{1}{1}$).

We see here motives the sources of which go back to a remote Neolithic Age.

Survives on clay *pyxides*.

Of the actual coexistence of vessels showing incised and punctuated decoration of the Neolithic class with chalk inlay, the remains of cylindrical lidded clay boxes or *pyxides* found in the 'Vat Room Deposit' had already afforded some good examples. Three of these, including the lower part of the receptacle, a lid and half of another, are reproduced in Fig. 57, *a*, *b*, *c*. In the lid (*b*) there are only traces of the original white 'chalk' inlaying, but this is clearly shown in the others, and all the patterns here represented, the chevrons and cross-hatched vandyking, the rows and triangles of white dots can be paralleled by Middle Neolithic sherds. The cup (Fig. 53, 1) from the lower stratum of House B has now supplied another good example

showing a zigzagging pattern with similar white inlays and a dark burnished ground, suggesting the same Neolithic parallels.

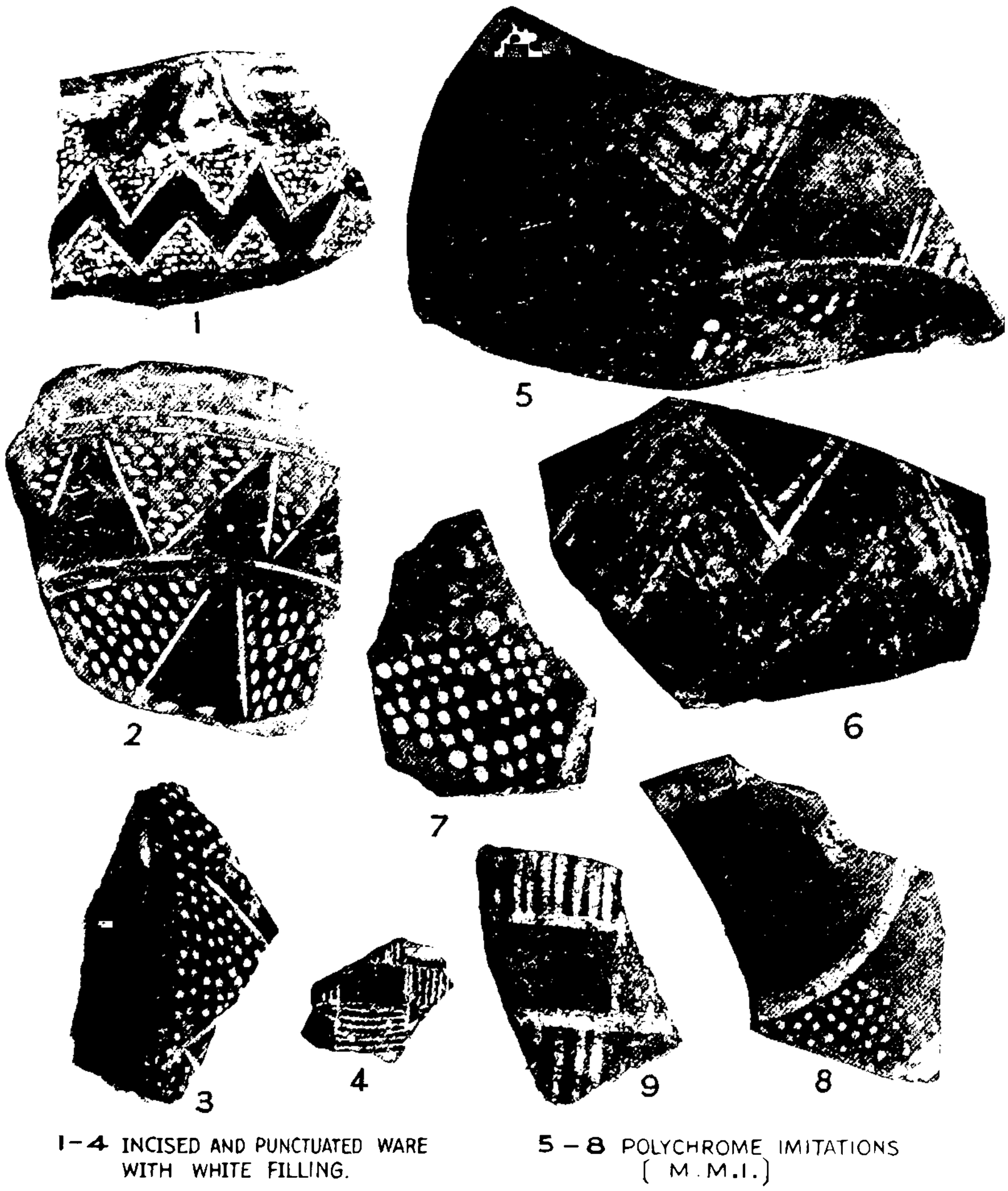


FIG. 56. M. M. I *a* POLYCHROME IMITATIONS TO ORANGE-VERMILION, YELLOW AND WHITE COMPARED WITH EARLY INCISED AND PUNCTUATED DECORATION WITH CHALK INLAYS.

Remains of clay *pyxides* like those found in the 'Vat Room Deposit' also occurred among the M. M. I *a* sherds of Houses A and B These incised clay boxes cannot be looked on as imports from the Cycladic side, though primitive pottery with graffito decoration was there much longer in general use. It is true that *pyxides* were also familiar to the Cycladic potters, but, when we come to compare the incised decoration visible on more or less contemporary specimens of the same form of clay box with these before

us, a marked distinction is at once observable. As upon other Cycladic pots, the graffito decoration—generally consisting of repeated chevrons—is too fine to have been made use of for chalk inlaying.[1]

In Crete itself the cylindrical clay-box type goes back to the beginning of the Early Minoan Age, as is shown by an example from the ossuary at Patema near Palaikastro.[2] But in this case the decoration is of the ordinary E. M. I kind, consisting of vertical bands of 'herring-bone' pattern, finely incised and presenting no trace of any kind of inlay.

We are confronted, therefore, by the remarkable phenomenon that the M. M. I *a pyxides* of the class shown in Fig. 57, with the white inlaying material in their incised lines and punctuations, represent an earlier tradition than similar clay receptacles dating from the first Early Minoan phase. For the fashion that they illustrate we have, indeed, to go back to the Middle Neolithic strata.

White and red Neolithic Inlays.

With regard to the colouring it must be further observed that the inlays of the Middle Neolithic pottery, to which reference has been made—specially remarkable on the primitive 'idols'—included, though more rarely, a bright ferruginous red as well as the chalky white. Although, among the sparse remains of the M. M. I *a pyxides* preserved to us, only the white inlays appear, it seems probable that on these as well as on their presumed models on less durable substances, this

a *b* *c*

FIG. 57. CLAY *PYXIS* AND LIDS WITH INCISED CHALK-FILLED DECORATION M. M. I *a* ('VAT ROOM DEPOSIT').

[1] E.g. Tsountas, Κυκλαδικά, Ἀρχ. Ἐφ., 1898, Pl. 9, 31, where the engraving is so fine as hardly to be visible in the Plate. Those from Pelos, in Melos, were equally finely engraved (see *Phylakopi*, p. 84, Fig. 70). For other parallels from Antiparos see *B. M. Cat. Preh. Aeg. Pottery*, p. 50, Figs. 60, 61. The engraving on the back of the so-called clay 'mirrors' is, however, deeper, and the inlaid linear and punctuated patterns offer a real comparison with those of the M. M. I *a pyxides* (see Ἀρχ. Ἐφ., 1899, Pl. 9, 4).

[2] R. M. Dawkins, *Palaikastro Excavations*, i, p. 5, Fig. 2. It contained the only pottery found at Palaikastro to be classed as E. M. I.

red colouring matter may also have been in use. What is certain is that in the series of polychrome patterns that now appear on M. M. I *a* pottery both the vermilion and the white elements of these primitive motives were reproduced.

How, then, account for such a revival after so vast an interval of time?

Suggested survival on perishable materials.

It seems necessary to revert to a suggestion—already made when the evidence was less complete[1]—that the reappearance of this primitive technique on M. M. I *a* pottery was due to its survival on some class of objects in perishable materials of which we have no record. May there not have been a tradition of boxes of this form, either of wood or of parchment with a wooden frame-work, keeping alive this simple form of patterns and colour effect?[2]

It is possible, indeed, to indicate another parallel source from which these quasi-Neolithic elements in colouring and design may have been taken over. It is clear that *pyxides* of steatite existed such as are said to have been found in Western Crete, already illustrated,[3] in which incised linear decoration—in that case spiraliform—was enhanced by a white inlaying material. On a steatite libation vessel from the little *sacellum* of the Phaestos Palace the incised designs were set off by a red inlay.[4]

Early Influence of Inlays.

Early use of Inlays.

Nor was this coloured decoration of steatite objects confined to the insertion of calcareous white or bright peroxide materials into the grooves and cavities. The square-shaped lid of a steatite *pyxis* from Kumasa[5] has a white marble-like plaque resembling a five-petalled flower set into it as its central ornament.

As illustrating the influence of intarsia work on the origin of early polychrome designs, the fragment partially completed in Fig. 59 has a special interest.

Rosettes derived from circular plaques.

Its 'rosette' pattern consists of a circle containing four segments of *vesica piscis* shape, a pattern that already appears in white on dark on pottery of E. M. III date (see Fig. 58). As a natural result of intersecting circles the pattern is itself one of a constantly recurring class, but the

[1] *P. of M.*, i, p. 177.

[2] A parallel phenomenon meets the eye over a large North African region. There, indeed, the common pottery is black and unadorned, but a very fine tradition of polychrome geometrical decoration in another field is kept alive by the camel's bladder flasks of the Saharan borders.

[3] *P. of M.*, i, p. 113, Fig. 81, *a*. Its type, however, seems to be Cycladic.

[4] L. Pernier, *Palazzo di Phaestos*, *Mon. Ant.*, xiv, pp. 480, 481, and Fig. 87.

[5] Xanthudides, *Vaulted Tombs of Mesarà* (ed. Droop), Pl. XXXI, No. 685, and p. 45.

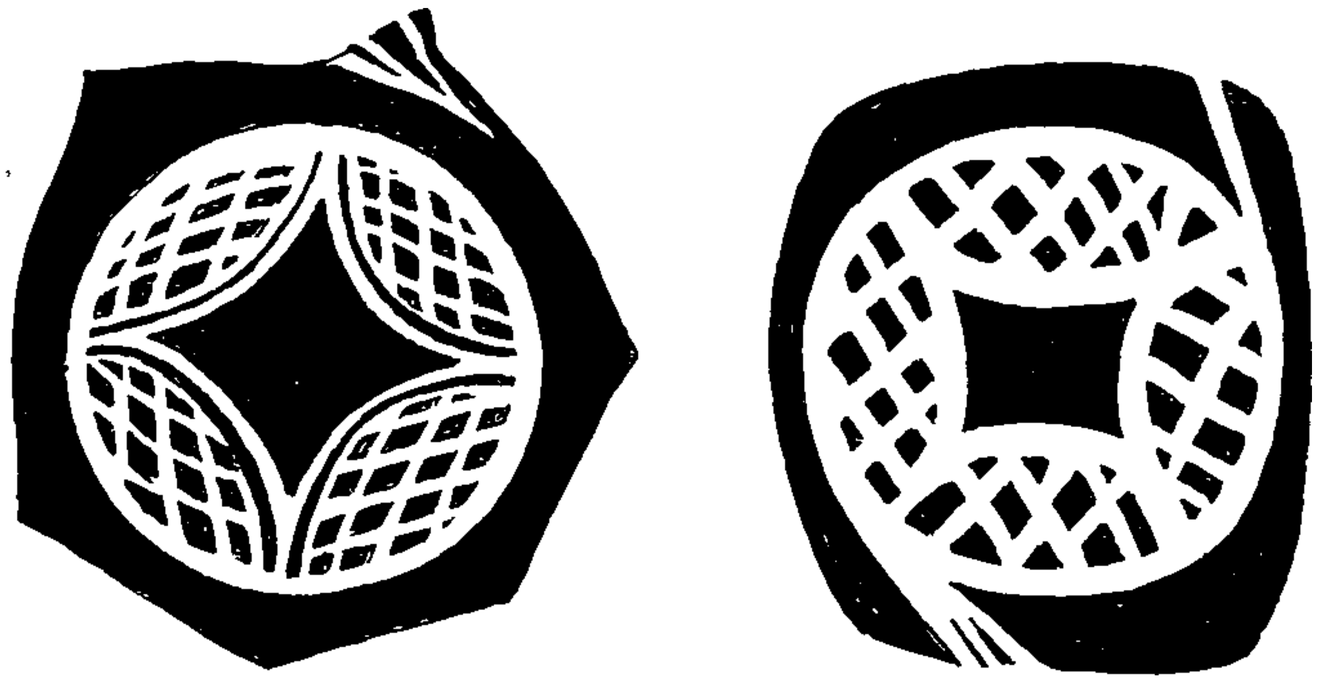


FIG. 58. SEGMENTAL 'ROSETTE' PATTERN ON E. M. III VESSELS.

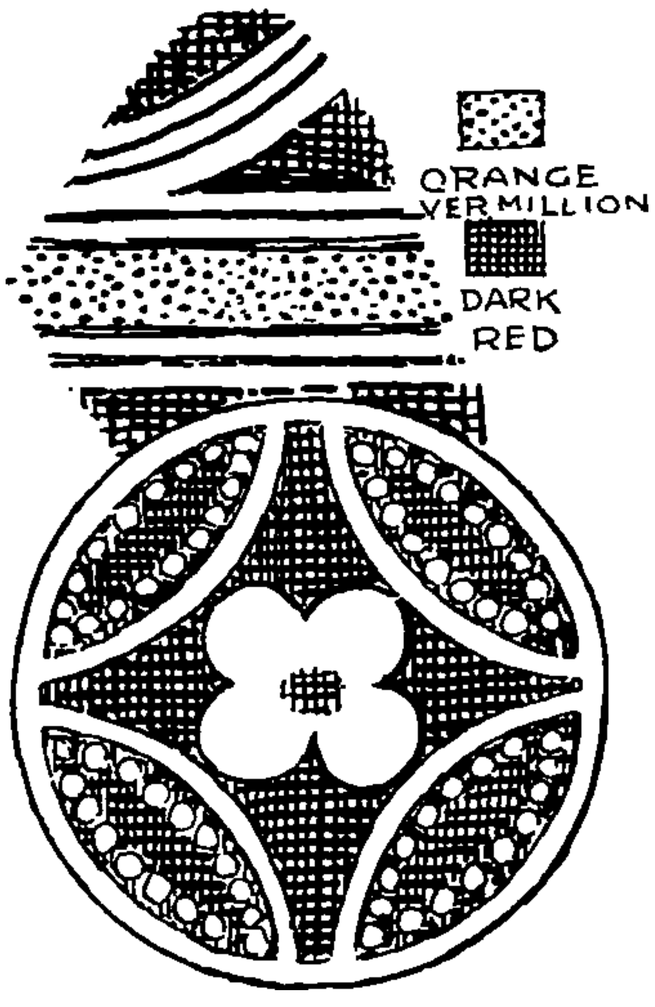


FIG. 59. FRAGMENT PARTIALLY COMPLETED, WITH 'ROSETTE' DESIGN LIKE ROUNDELS FOR INLAYING.

Minoan associations in which it appears certainly point to its having been taken over from circular plaques for inlaying. Well-known examples of these are to be found in faïence roundels of native fabric, such as the one found in the 'Room of the Throne'—derived perhaps from the sides of some small wooden chest—and in the ivory and crystal 'medallions' of the Royal Draught Board.[1]

At first sight it would seem a reasonable supposition that these later inlaid designs were due to models supplied by XVIIIth Dynasty Egypt, where such patterns were a constantly recurring feature of ceiling designs. In faïence roundels for inlaying we there see 'rosettes' with both four and three segments.

But it must still be borne in mind that this 'rosette' pattern, consisting of a circle with three or four segments, has a much more ancient history in Crete than in Egypt, where examples of greater antiquity than the New Empire seem to be non-existent.[2] The rosette on the M.M. I*a* polychrome sherd (Fig. 59) is, as we see, itself a derivative of E.M. III examples, painted white on a dark ground (Fig. 58).[3] These earlier specimens,

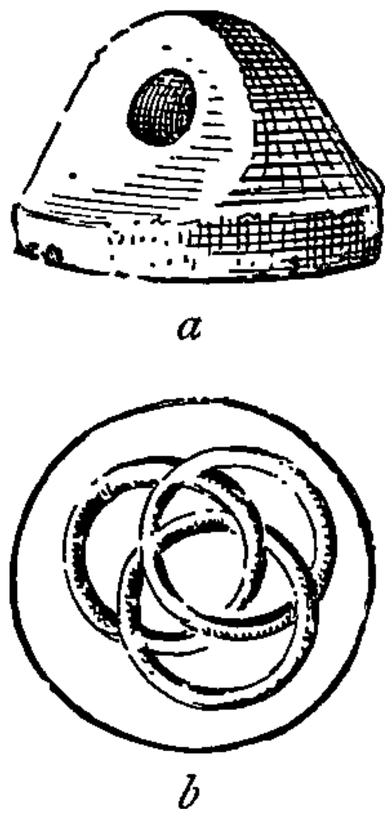
[1] *P. of M.* i, p. 474, Fig. 338.

[2] Petrie observes (*Egyptian Decorative Art*, p. 47), 'The Egyptians never used circles freely in decoration: no examples are known before the Eighteenth Dynasty, and but few then.' On p. 49 he expresses a doubt whether the Egyptians 'used compasses at any time'. (It is hard to understand, however, how the ceiling designs of the New Empire, in which circles are constantly repeated, were executed without such aid.) It is certain that by the beginning of the Middle Minoan Age the Cretan seal-engravers were producing designs by means of intersecting circles mechanically executed.

[3] Cf. *P. of M.*, i, p. 113, Fig. 80, *b*. Both fragments are from the North Trench at Gournià. (See Boyd-Hawes, *Gournià*, p. 57, though not illustrated there).

moreover, show both the type here reproduced in Fig. 58 with four segments and another version with three. Faïence inlays indeed, of which we have fragmentary evidence, already occur in E. M.. II, and the possibility always remains that the early 'segmental rosette' patterns on Minoan pottery go back to roundels for inlaying of the same segmental class and of indigenous fabric.

Probable Chaldean sources of inlays.



a

b

FIG. 60, *a*, *b*. CRYSTAL BEAD-SEAL, ARKHANES, WITH INTERSECTING CIRCLES. $(\frac{2}{1})$

In the 'Vat Room' Deposit belonging to the same epoch—M. M. I *a*—as that with which we are now dealing, there occurred remains of faïence inlays of very fine texture together with well-preserved plaques that seem to have been formed of some white shell[1]—probably the imported *Tridachna*. Some of these when placed together form the outer circle of a 'roundel' leaving a quatrefoil inner space, clearly intended to receive some other inlaying material.

For the execution of such patterns some kind of compass was necessary. On the other hand, parallel schemes were executed on seal-stones by means of tubular drills. A good example of such a design, executed by means of a drill 6 millimetres in diameter on a crystal bead-seal, is shown in Fig. 60, *b*, probably belonging to the early part of M. M. II.[2]

When it is recalled that evidence is forthcoming of the existence of Chaldaean inlays of trefoil form,[3] it becomes probable than in this as in other parallel cases we must look for a much more distant source in the Euphrates Valley. The region where bitumen was so freely used—affording such an easy medium for decorative incrustations—was in fact the natural home of the inlayer's Art.

Decorative Plant Forms in the Earliest Polychrome Style.

Amongst the earliest specimens of decorative plant forms in the polychrome style the Cup (Fig. 53, 3) also from House B, with its triple spray—red with white central veins on a buff ground—leads up to the more complete design on a handled bowl (Pl. XXVIII, *c* 1–3) from the M. M. I deposit in the Early Town drain to the North-West of the site,[4] here first reproduced in colours. The fuller development of the motive given in the

Plant forms in early Polychromy.

[1] *P. of M.*, i, p. 170 and cp. p. 169, Fig. 120.

[2] Said to have been found at Arkhanes.

[3] Cf. *P. of M.*, ii, Pt. I, p. 261, Fig. 156 *a* and cf. Petrie, *Decorative Patterns of the Ancient World* (British School of Archaeology in Egypt, 1930), Pl. XXV, H. A. 1 (referred to as 'Babylonic', J.C.B. LIII).

[4] *P. of M.*, ii, Pt. I, p. 369, and Fig. 205.

Coloured Plate—which belongs, however, to M. M. I *b*—clearly shows that it was intended to represent a crocus. The floral designs on this bowl—white, red, and orange on the dark background—are of exceptional decorative merit.

Painted Jug with Cross or Wheel-pattern and Circle.

Cross and Circle on early Poly-chrome jug.

Among the early polychrome vessels from House B the most striking was the jug (Fig. 53, 9), presenting on its ruddy brown ground a broad circle in Indian red with white dotted borders inside and out, and within it a cruciform design in the same creamy white (Fig. 61).

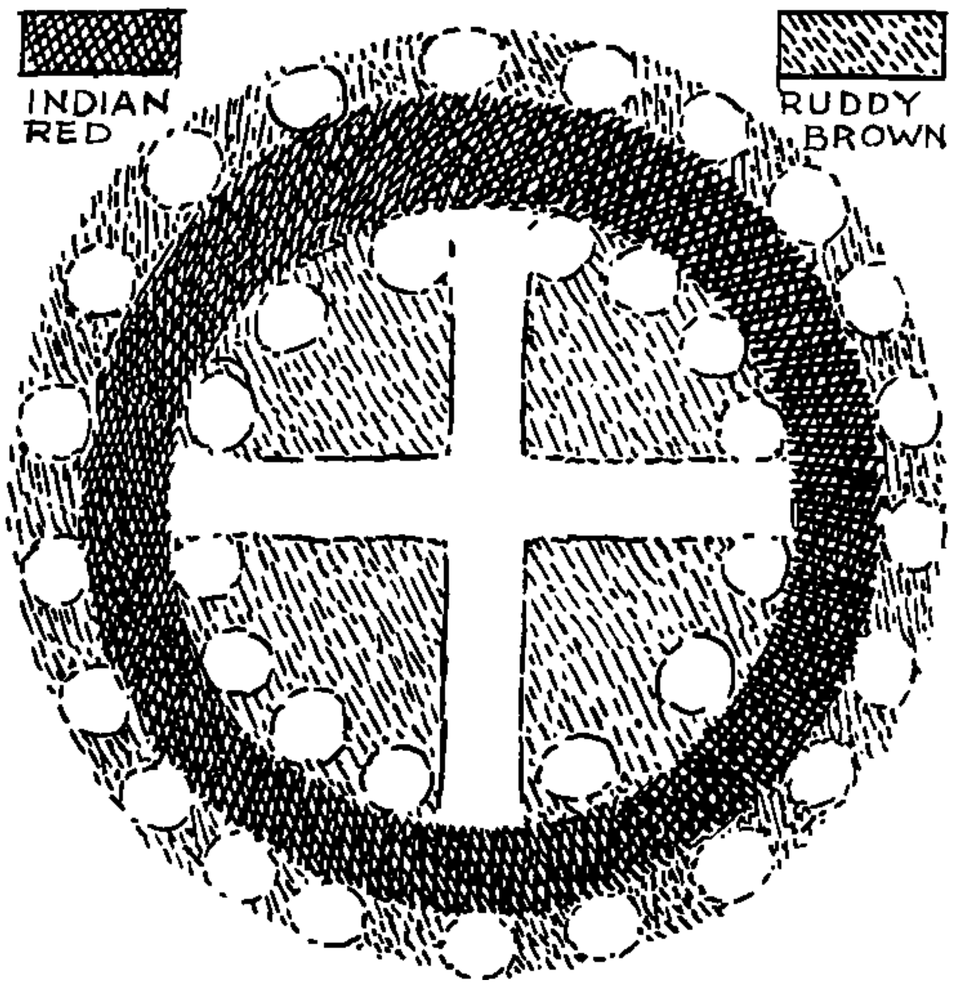


FIG. 61. CROSS AND CIRCLE ON M. M. I *a* JUG: HOUSE B.

It is not fanciful to suppose that the cross here seen within the dotted circle may have a symbolic and religious significance. Of the cross itself as a widely diffused astral sign among primitive peoples—which at times becomes a general symbol of divinity—something has already been said in connexion with the marble cross inlay from the Temple Repository and the cruciform signs on seal-impressions there found.[1] Within a dotted circle, in that case surrounded by rays (Fig. 62), it is seen on the Siteia mould,[2] accompanied by sacral horns and double axes, in one case in the hands of the Minoan Goddess. The rayed circumference of the disk on the mould here clearly indicates a solar emblem.

Earliest known Poly-chrome vessels: M. M.III.

The Indian red colouring with a milky white border here seen corresponds with the technique of the earliest known example of Minoan ceramic polychromy, namely a bowl-like jug, with spout and handle, obtained by me, before the days of the Excavation, from the South-West of what afterwards proved to be the Palace site.[3] Its 'tea-pot' shape exactly corre-

[1] *P. of M.*, i, p. 513 seqq.

[2] 'Εφ. 'Αρχ., 1900, Plates 1 and 2.

[3] *P. of M.*, i, p. 110, Fig. 78: the pattern appears on a blackish ground with signs of glaze. A similar vessel from the Kamares Cave with a typical E. M. III pattern, white on a dark ground, is illustrated *loc. cit.*, Fig. 77. The form already occurs in E. M. II (Xanthudides, *Vaulted Tombs of Mesarà* (trans. Droop), Pl. XXVI, 4107: Koumasa). For early M. M. I *a* examples see *op. cit.* (Portì), Pl. XLI, Nos. 4962, 4964. The jug is in the Ashmolean Museum.

sponds with both E. M. III and E. M. II, examples, but the dark ground seems better to range with the last Early Minoan phase, though the form itself, with a buff ground, survives into early M. M. I *a*.

Influence of stone-work not apparent in M. M. I *a* Polychromy.

As bearing on the chronology of the successive phases of ceramic polychromy, it is interesting to note that the reaction of variegated stone-work does not seem to be perceptible on any of the specimens from the newly-discovered Houses A and B, where the M. M. I *a* style is so clearly delimited. The white dots that appear on these on the darker ground are arranged in rows or in geometrical groups, and had no relation to the speckled liparite vases later imitated. Nor have the 'birds' nest' bowls (themselves of Egyptian derivation), now coming into vogue at Knossos [1]—there of local breccia derived from quarries in the neighbouring Kakon Oros [2], with its black nucleus irregularly shot with white-bordered vermilion veins—as yet supplied the model for a class of polychrome vessels in which both the bizarre designs and the contrasted colours are reproduced.[3]

This absence of stone-grain patterns is itself a remarkable characteristic of the M. M. I *a* ceramic phase.

[1] For examples see *P. of M.*, i, p. 177, Fig. 126, and p. 178, Fig. 127, *a* (lid). For coloured illustration cf. Seager, *Mochlos*, Pl. IX (iii, *a*). These M. M. I 'birds' nest' bowls (originally provided with lids) were themselves copies of a class of stone vessels common in Egypt from the Fourth Dynasty onwards.

[2] Similar breccia occurs in other Cretan districts.

[3] *P. of M.*, i, p. 178, Fig. 127, *b*, *c*. In other cases the bizarre painted decoration is on a buff ground.

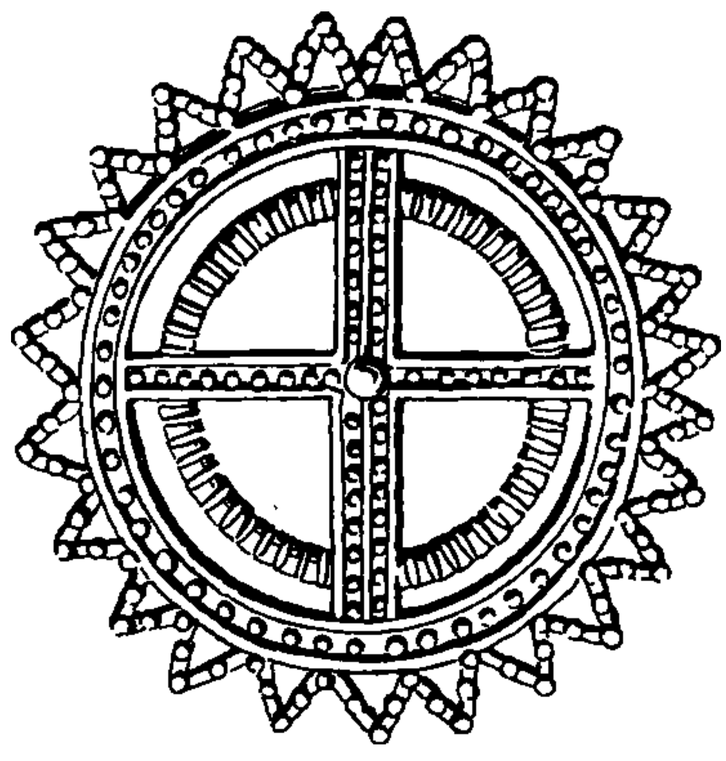


FIG. 62. RAYED SOLAR SYMBOL OF GODDESS OF DOUBLE AXES WITH WHEEL-LIKE CENTRE, FROM STONE MOULD, SITEIA, E. CRETE.

§ 93. Fresh Lights on Polychrome Pottery of the Great Age: 'Barbotine' Ware and the Influences of Sea-shells.

Break in stratification at end of M. M. I a*; Series of later deposits representing M. M. I* b*; Fresh evidence from 'West Polychrome Deposit'; Fabric of finest 'egg-shell' ware perfected by M. M. I* a*; Metal prototypes of 'tumblers'; M. M. I* b *Polychrome example; Later evolution of 'tumbler' type; Colour changes in M. M. I* b*; Textile character of plant decoration; Rise of 'Barbotine' technique; M. M. I* a *examples of 'Barnacle work'; Illustrated by naturalistic examples of M. M. III; Minoan fondness for grotesque natural designs; Secondary 'Barbotine' phase characteristic of M. M. I* b*; Its marine sources—the 'Thorny Oyster' and 'Thorn-back Crab'; This 'Prickle work' used in designs of shells; Fine combination of 'Barbotine' technique with early Polychromy on M. M. I* b *jug; Exquisite development of 'Prickle work' on M. M. II* a *bowls; Lower date of 'Barbotine' decoration—absent at Kahun; Late example at Harageh* c. *1900 B.C. Sporadic survivals; M. M. I* a *Cockle-shell relief and later parallels; 'Nature-moulding' as well as 'Nature-printing'; Influence of Sea-shells on evolution of ornament; Whorl-shells in relation to spiraliform motives;* Dolium *or 'Tun-shell' in Minoan Art; Conch-shell or Triton; Parallel decorative evolution of whorl-shells in New Mexico; Curious compound shell-type—perhaps derived from 'Tun-shell'; Development of 'Marine style' begins in M. M. I* a*—Cockle-shell reliefs; Later example on metal vase; Repoussé reliefs of compound bivalves on polychrome vessels; Specimens identical with Knossian from Phaestos and Palaikastro; Distributed from Royal Knossian factory; Similar reliefs on 'Creamy border' ware from Knossos; This class first distinguished here; 'Fruit-stand' type; 'Tortoise-shell ripple' motive imitated from flutings of metal-work; Cups with this motive copied from gold goblets like those of Mycenae; Petalled vase and flower—floral attachment imitated from jewellery; Parallel 'flower cones' from early Chaldaean sites; Beaked ewer in 'Creamy-bordered' Style; Polychrome vases with similar neck-ring; Metal-work origin of this class of ewer; 'Creamy-bordered' class based on silver work; Argonaut reliefs from 'Kouloura' 2—earliest examples of a persistent Minoan type; M. M. II* a *polychrome vases—'Prickle work' imitated in profile; Thorn-bossed bowls and 'Barbotine' prototype; M. M. II* b *polychromy—Palmette decoration and vessel parallel to the 'Abydos' pot.*

Ceramic Break at Close of M. M. I *a*.—New Material for M. M. I *b* Phase, representing Earliest Epoch of Existing Palace: its Marine Models.

Break in stratification deposits at end of M. M. I *a*.

THE consistent mass of ceramic remains from the houses under the newly discovered 'Koulouras' is seen to end abruptly with the mature phase of M. M. I *a*. The same was found to be the case with the deposits relating to the Palace as originally planned that came to light beneath the floors of the building as arranged in the more permanent shape known to us.

The pottery of the 'Koulouras', like that of the Palace in this secondary form, begins with M. M. II *a*. In both cases, therefore, a lacuna exists, ceramically marked by the more advanced phase, *b*, of M. M. I—the very epoch, that is, to which the second planning of the great building itself must in all probability be referred.

The reason of this lacuna in the evidence is sufficiently explained by the general law—already often referred to—by which pottery found on a floor—except in the case of abnormally large vessels such as the great store jars or *pithoi*—belongs to the latest epoch of its use.

Series of deposits representing M. M. I *b*.

The M. M. I *b* phase was in fact well illustrated by a series of deposits on the Palace borders, including that derived from a newly excavated walled space near the 'North-West Treasury House'. Examples derived from the penultimate stratum of the sanctuary of the Monolithic Pillars and the 'Kamares pit', as it was then called, on the Eastern Slope, have been illustrated in the first Volume of this work.[1] It was possible thus, in the Section referred to, to distinguish in general terms an earlier and later stage of M. M. I, but the point of departure at present secured by the cutting short of the M. M. I *a* houses A and B, as well as the positive evidence acquired of the immediately succeeding M. M. I *b* ceramic class from the rich deposit in the recently explored area North of the 'Koulouras' have now supplied fuller data. This deposit, which occurred in a basement space West of the area occupied by the North-West Treasury Building, is of special importance in the present connexion. Not only did its earliest elements include remains of the transitional M. M. I *b* phase, but it was found to be also finely representative of the succeeding M. M. II Period, presenting illustrations of the great Age of ceramic polychromy. It practically showed no admixture from the proto-palatial M. M. I *a* stratum[2] on which it was directly superimposed. At the same time, as supplying continuity with M.M. I *b*, it

Fresh evidence of it from 'West Polychrome Deposit'.

[1] *P. of M.*, i, p. 179 seqq., and Coloured Plate I (opposite p. 231).

[2] One or two clearly intrusive M. M. I *a* fragments occurred in the deposit, just as in the lower direction there were a few M. M. III, L. M. I, and L. M. II sherds. But the material

may be conveniently called the 'West Polychrome Deposit', it is at present possible to discriminate with much greater nicety between the two phases. Some supplementary data may therefore be given in this place, though, even as it is, the transition between the two ceramic stages is of so gradual a nature that it is impossible to draw a hard and fast line.

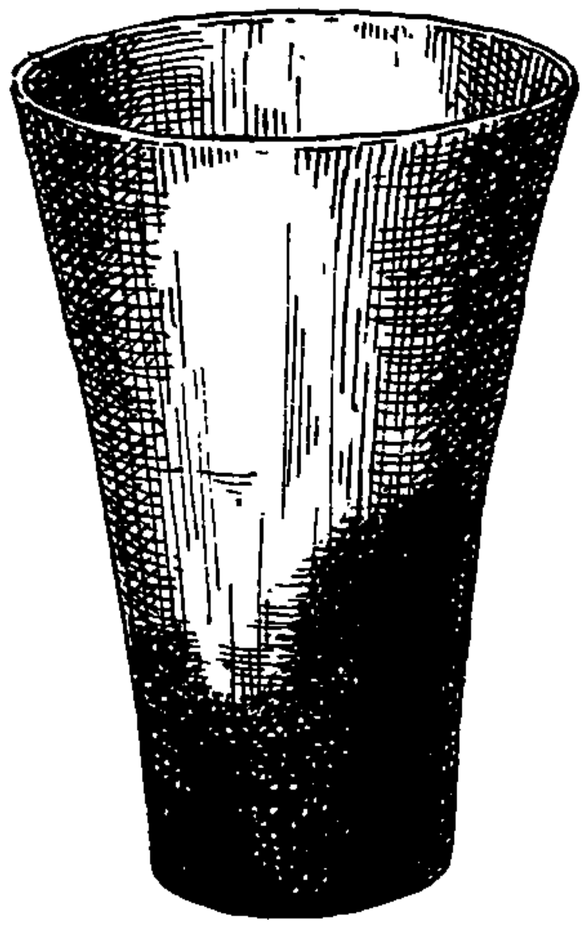


FIG. 63. MINIATURE 'TUMBLER' OF EGG-SHELL WARE, M. M. I *a* (MAGAZINE I).

Fabric of finest 'egg-shell' ware already mature by M. M. I *a*.

As regards fineness of texture it may be said at once that some of the vessels found under the First and Third Magazines, and in the 'Vat Room' deposit, already attain the 'ne plus ultra' of this technique. We see, indeed, in the little flat-bottomed 'tumblers' found in both these deposits (Fig. 63)—and which still preserved the red and black 'mottled' decoration of E. M. I and II—a tenuity of fabric never quite equalled even by the finest 'egg-shell' cups of the Royal Pottery Stores, executed in the mature M. M. II *a* style.

Metal prototypes of 'tumblers'.

The extreme thinness of the walls of these little 'tumblers' might itself be taken to point to an origin in metal-work. A straight-sided vessel of somewhat broader proportions and thicker walls was in fact found in an E. M. II tomb at Sphoungaras in Eastern Crete, in company with an ewer and a pedestalled cup clearly of metallic derivation.[1] That this E. M. II clay cup itself reflects an early Egyptian copper form with somewhat more expanding sides[2] is a fair conjecture when it is remembered that the long-spouted ewer type of the same material with which it is associated was undoubtedly reproduced with an added handle by the Early Minoan potter.[3]

M. M. I *b* polychrome example.

The 'tumbler' type with thin walls, though not quite of the same tenuous fabric, was taken over in the M. M. I *b* polychromy, and a good specimen is shown in Fig. 64 *a*, *b*.[4] The ornament here consists of black squares framed by narrow bands of a pale ochreous colour, and presenting a conventional floral decoration consisting of red disks with cruciform 'petals' of pale ochre:

as a whole was very purely representative of M. M. I *b* and of the whole M. M. II.

[1] Edith H. Hall (Mrs. Dohan), *Excavations in Eastern Crete: Sphoungaras*, pp. 48, 49, and cf. *P. of M.*, i, p. 79 (Fig. 47), and *ibid.*, ii, Pt. II, p. 635 (Fig. 399).

[2] E.g., *P. of M.*, i, Fig. 48 *b* (p. 80).

[3] See *ibid.*, p. 80, and compare Fig. 46 B (p. 77) and Fig. 48 *a* (p 80).

[4] This cup was already illustrated in colours, *J. H. S.*, xxiii (1903), Pl. VI, 1 for Dr. D. Mackenzie's paper on the *Pottery of*

another flower is painted on the base, Fig. 64, *b*. In the succeeding Period the sides of this 'tumbler' type are slightly incurved, producing a more

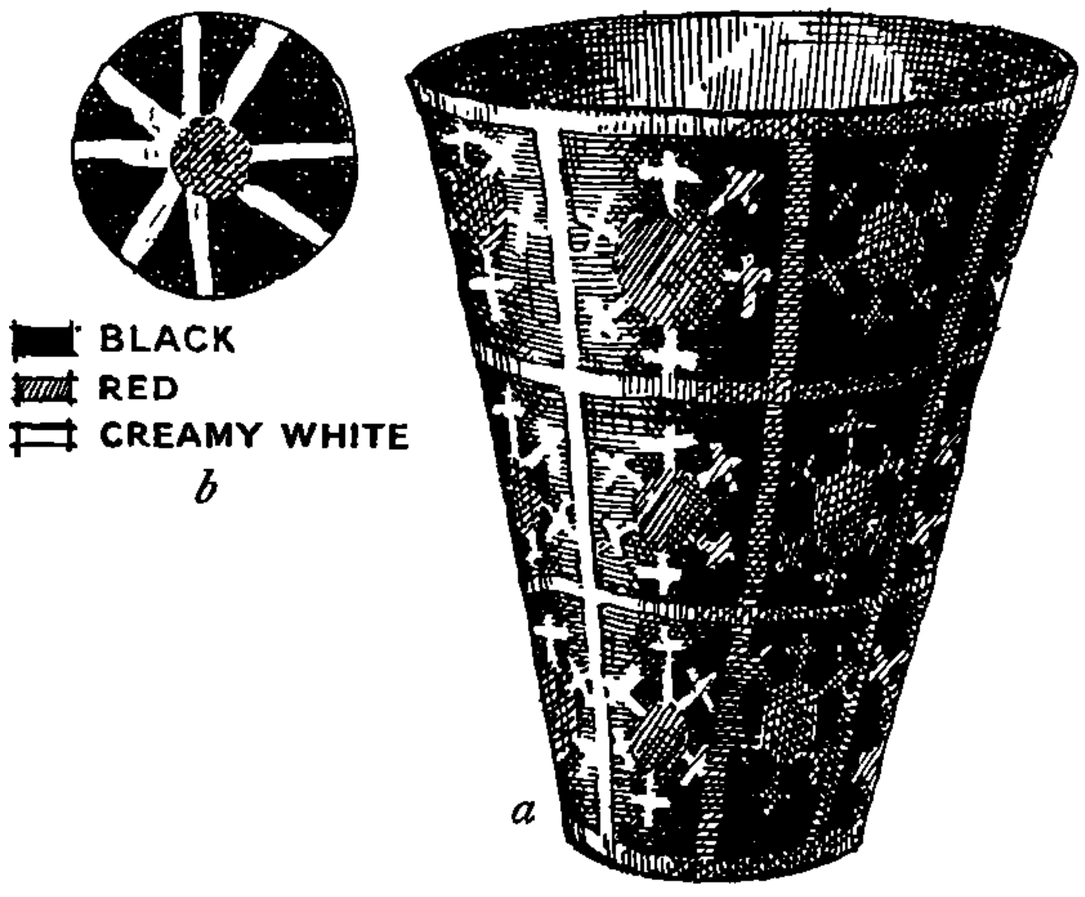


FIG. 64. *a*, 'TUMBLER' WITH POLYCHROME FLOWER, M. M. I *b*: *b*, BASE OF SAME.

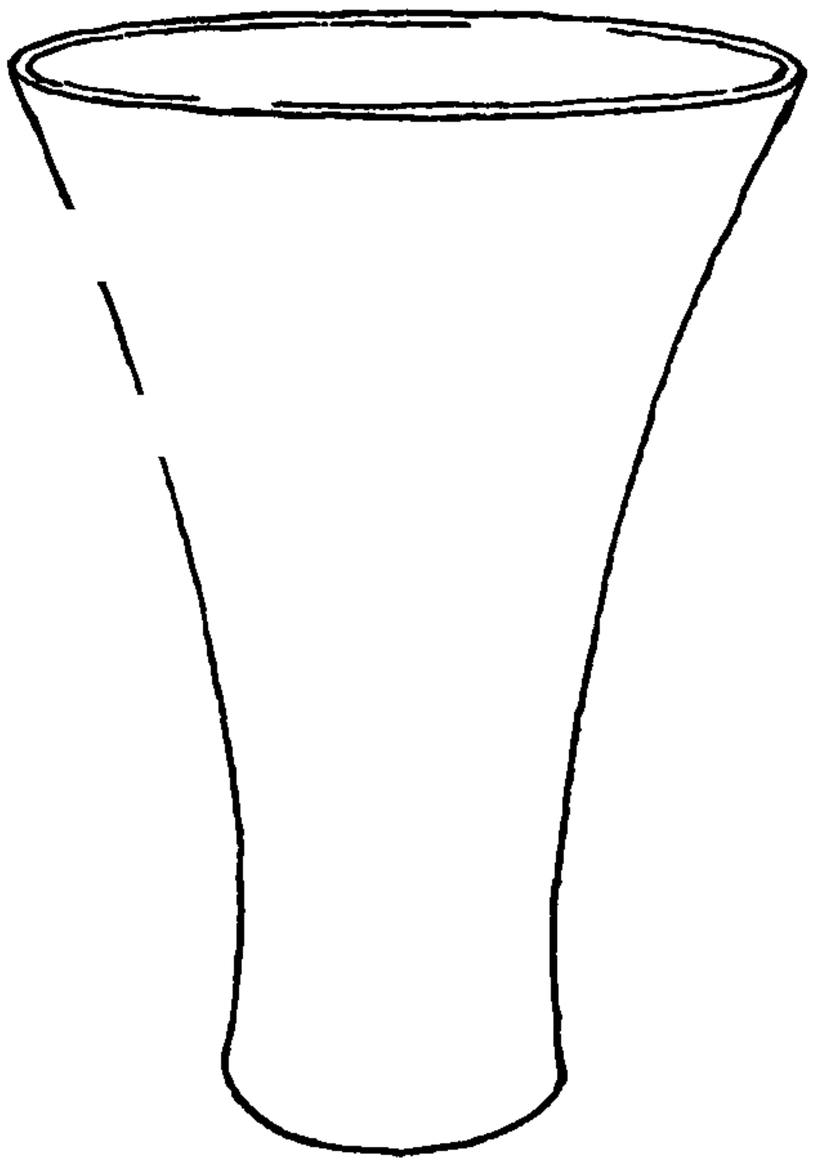


FIG. 65. OUTLINE OF 'TUMBLER' TYPE, M. M. II *a*.

elegant outline, Fig. 65, while the whole vessel is often of higher build. A fine specimen of this, belonging to the acme of the M. M. II polychrome style, was found during the recent excavation of the walled space above referred to near the North-West Treasury Building, and is reproduced in the Coloured Plate XXX, A 1, 2.

Later evolution of 'tumbler' type.

Among the points of differentiation of vessels of the M. M. I *b* class from those of the M. M. I *a* phase may be noted the disappearance of the madder-red, well represented in the earlier vessels,[1] and the substitution for this of a powdery pigment of bright vermilion hue. Orange-yellow becomes more frequent, but inclines more and more towards a pure yellow. In the earlier stage of M. M. I, as we have seen, there appears a pure geometrical decoration inherited from the preceding style, and often accompanied by speckled white or red, a tradition derived through some other

Colour changes in M. M. I *b*.

Knossos, pp. 172, 173. It could not, however, at that time be so exactly classed.

[1] Madder-red stripes bordered by white already appear on a spouted bowl with a dark ground found on the site of Knossos previous to the excavations, and clearly belonging to the E. M. III class (*P. of M.*, i, pp. 110, 111, and Fig. 78).

medium from Neolithic times. But in the maturer stage of this ceramic style, polychrome motives suggested by natural objects such as plants, flowers, and sea-shells come more to the fore, though these designs are themselves so stiff that they show more resemblance to textile patterns, to which in many cases we may surely trace their origin.

Plants and Flowers in Textile Style on 'Polychrome' Decoration, M. M. I *b*.

Textile character of plant decoration.

Some specimens of M. M. I *b* sherds showing plants and flowers or fruit are given in Fig. 66 *a–e*, which may be regarded as supplementary to the illustrations given in Volume I of this work.[1] The textile character is very apparent in the development, here given (Fig. 66, *a*), of the floral and foliate decoration of the pedestal of a fine fruit-stand found at Palaikastro.[2]

Little fresh evidence was brought out by the supplementary excavations regarding the influence of early stoneware on ceramic decoration, such as the imitation of the native breccia, and the spots and dots of conglomerate and liparite, on the early polychrome ware.[3] This, however, was also a fertile source.

'Barnacle Work' of M. M. I *a* and its Naturalistic Illustration in M. M. III.

Rise of 'Barbotine' technique.

A still more typical feature of the M. M. I *b* ceramic phase, as of the immediately succeeding stage of M. M. II *a*, is its constant recourse to a form of relieved decoration to which, in its better-known aspects, the name of 'barbotine' is generally applied. The course of discovery has confirmed the view previously put forward in this work,[4] that fabrics of this class are due to the imitation of certain rough surfaces of marine objects.

M. M. I *a* examples of 'barnacle' work.

In M. M. I *a* we already see this technique in an almost exaggerated shape in certain small vessels, notably cups, and fragments of other small vessels similarly decorated have been derived from more than one stratum of that date, and other examples occurred in the newly discovered houses beneath the 'Koulouras'. Much of this was clearly taken from marine surfaces—often other shells covered with a barnacle growth—as will be seen from the M. M. I *a* cup and fragment of a bowl given in Figs. 67, 68.

Illustrated by naturalistic

This highly relieved form of 'barbotine' decoration must at once be recognized as closely related to certain naturalistic reliefs of marine

[1] See p. 184, Fig. 133.

[2] P. M. Dawkins, *Excavs. at Palaikastro* ii (*B. S. A.*, ix), pp. 308, 309, Fig. 8, and cf. *P. of M.*, i, p. 184, Fig. 133, *e*.

[3] See especially on this, *P. of M.*, i, pp. 177–9.

[4] Cf. *ibid.*, i, pp. 181, 182, Fig. 129 *a*.

FIG. 66 *a–e*. FLORAL PATTERNS OF A TEXTILE CHARACTER ON M. M. I *b* POTTERY.

mouldings of M. M. III.

creatures that characterize the advanced M. M. III stage. These are best represented by the reliefs on a remarkable clay basin that occurred in the first discovered 'Kouloura' (1), full-sized drawings of which are here re-

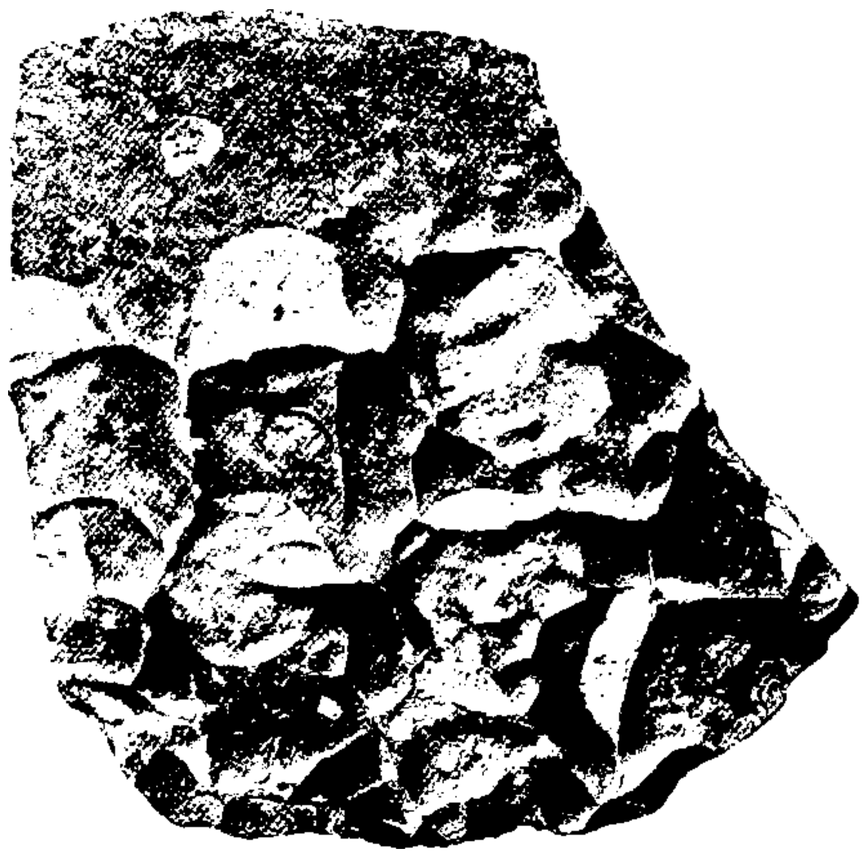


FIG. 67. PART OF M. I *a* BOWL WITH 'BARNACLE WORK': BUFF GROUND WITH RUDDY STREAKS. ($\frac{1}{1}$)

FIG. 68. M. M. I CUP WITH 'BARNACLE WORK'.

produced for comparison (Fig. 69, *a–h*).[1] The naturalistic barnacles above at once reveal the source of the bizarre reliefs of Figs. 67, 68. Besides the very realistic pecten shell Fig. 69, *f*, which with its baked clay core might be taken for a geological specimen, the little crabs cast after death, and the limpet beside one of these, Fig. 69, *g*, the principal source of this marine ornament as here seen, Fig. 69, *a–e*, is to be found in the barnacle growth on rocks, or on the hard shell of certain sea creatures.

Minoan fondness for grotesque natural designs.

To the grotesquely moulded surfaces that already appear on M. M. I *a* pottery we may well apply the general name of 'barnacle work'. That it should already have had such a vogue in Crete at a date so early as the close of the Third Millennium before our era is a singular evidence of the Minoan taste for bizarre natural forms—otherwise displayed at a slightly later date by the reproduction of rocks and grottoes. No similar artistic vein is traceable either in Chaldaea or the Nile Valley, and it was quite foreign to the early Greeks. We seem to be nearer to the fantasy of the Far East.

[1] See *P. of M.*, i, pp. 521, 522, and Fig. 380.

Secondary 'Barbotine' Phase characteristic of M. M. I *b*.

Secondary 'Barbotine'

What may be called the secondary phase of this 'barbotine work', in which the raised ornaments take their place as an integral part of colour schemes,

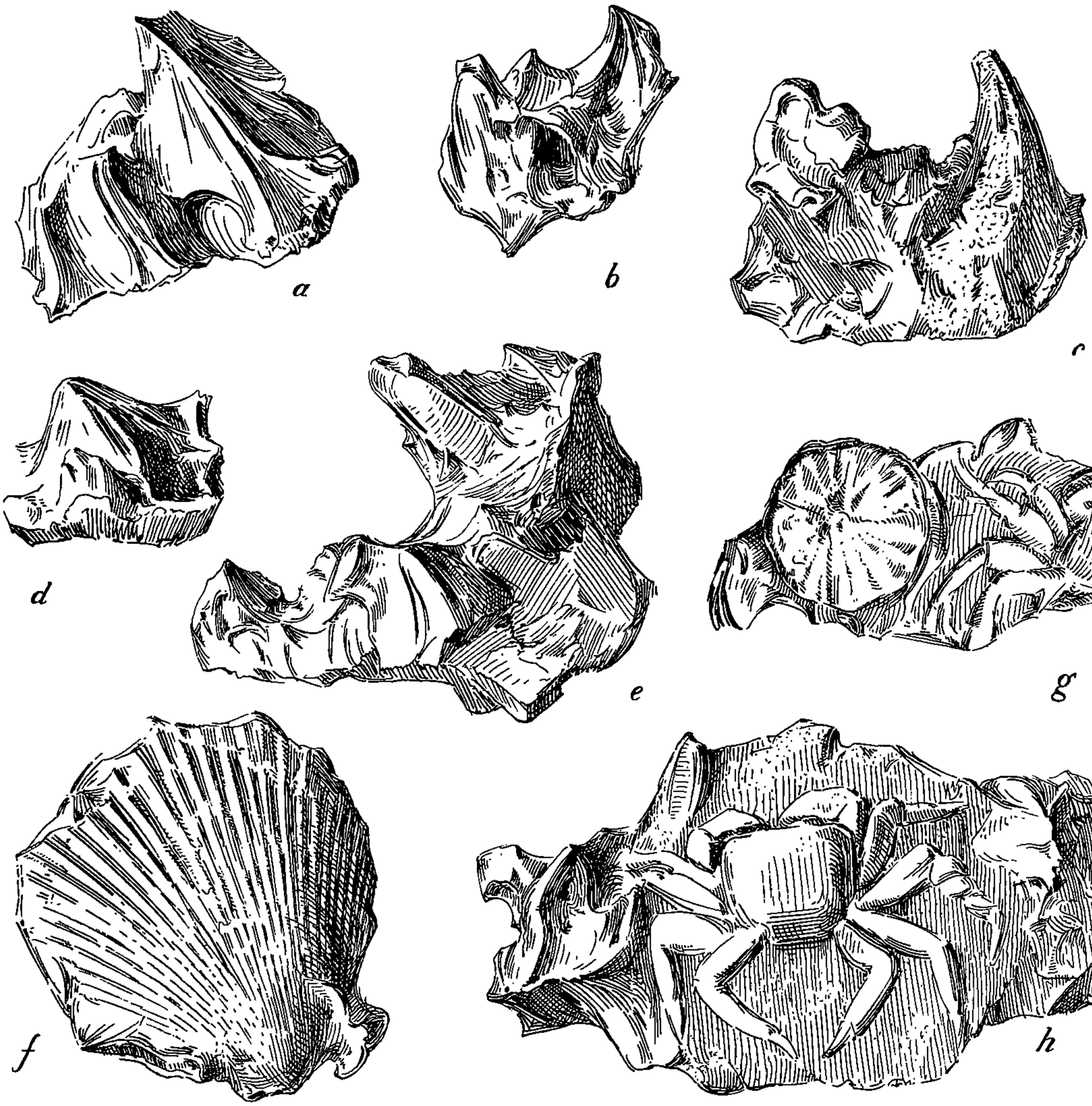


FIG. 69. CLAY MOULDINGS AND CASTS OF MARINE CREATURES ON M. M. III BASIN.

belongs in its chief manifestations to the succeeding ceramic style, M. M. I *b*, at present under discussion, though its beginnings may be already traced before the close of M. M. I *a*. It is still well represented in M. M. II *a*, and indeed, forms a feature in some of the most artistic productions of the acme of Middle Minoan Ceramic Art.

phase characteristic of M. M. I *b*.

In this secondary stage the elements of relief show a more ordered arrangement, and its ridges often act as frames to bands of coloured

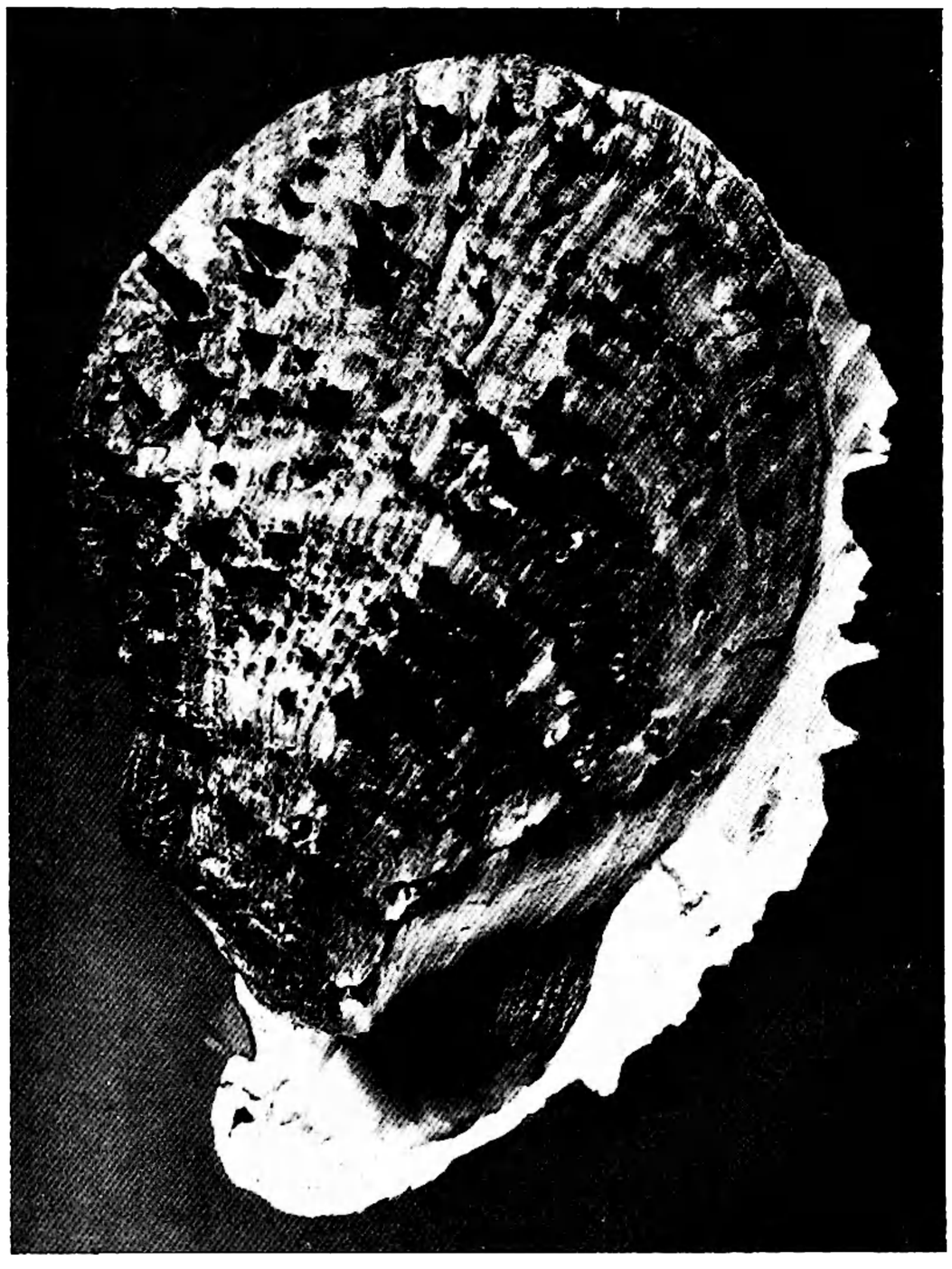


FIG. 70. 'THORNY OYSTER', *SPONDYLUS GAEDEROPUS*.

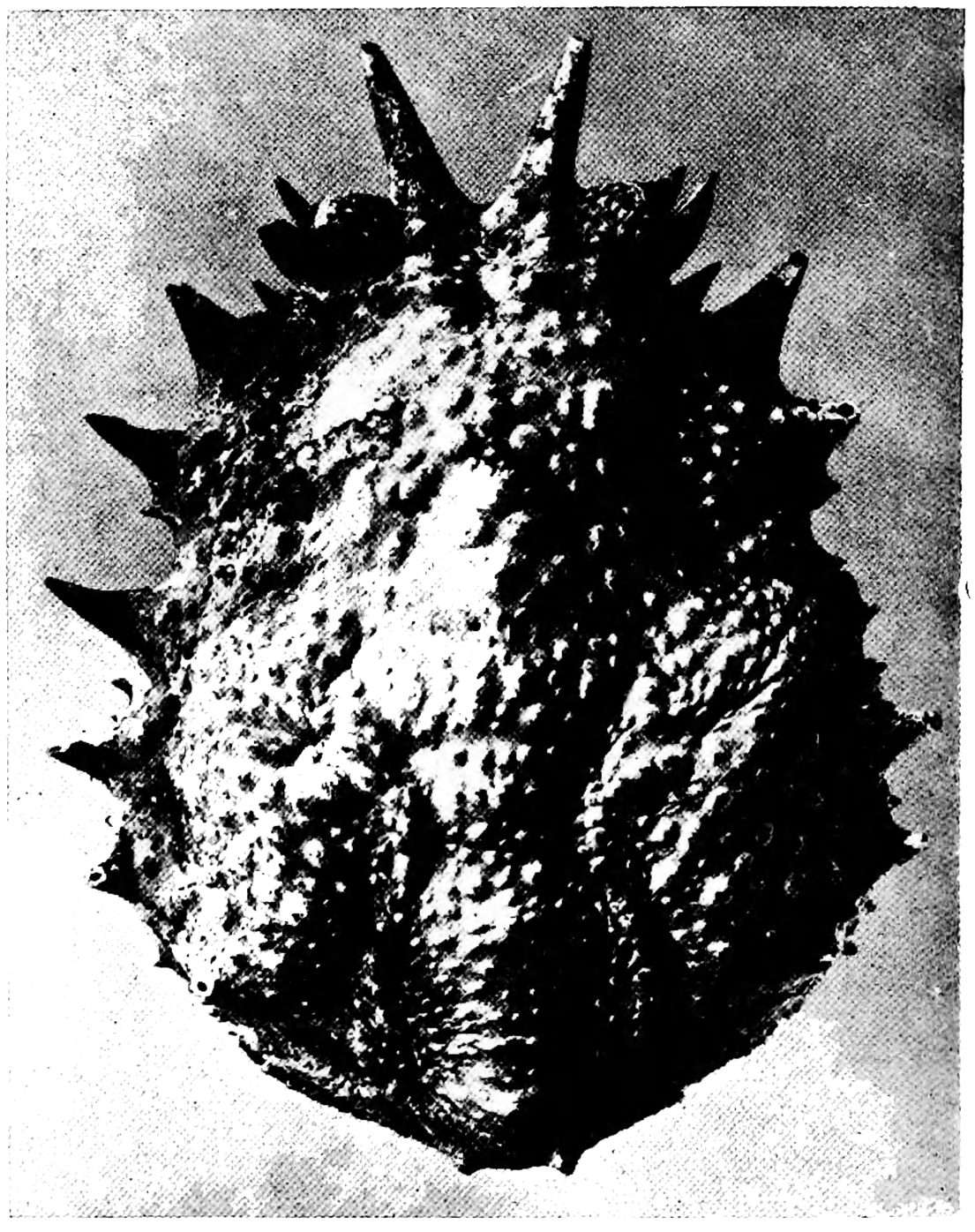


FIG. 71. 'THORN-BACK' CRAB.

patterns. Their bizarre contours disappear, giving place to distinct thorny protuberances, or to mere prickles and warts.

Its marine sources—the 'thorny' oyster.

But the marine origin of the excrescences now in vogue is none the less apparent. There can be little doubt that some were supplied by sea-shells. One likely species at least—the *Spondylus gaederopus*—belonging to the family popularly known as 'thorny oysters'—was of frequent recurrence in the excavations at Knossos.[1] A series of specimens were in fact found, some of them in a very complete state, among the M. M. II–III refuse of the newly discovered 'Koulouras'. The appearance of thorn-like protuberances on this large shell, arranged in rows and on ridges, may be gathered from Fig. 70 reproducing a modern specimen—without however its beautiful rosy lilac colouring. Shells of this kind were actually found in a M. M. II medium in 'Kouloura' 2, the prickles of which

[1] Specimens also occurred with the other shells found in the 'Temple Repositories', and which seem to have served as a kind of pavement decoration for the Central Shrine.

have been a good deal broken, but which on the other hand show a rough patch on the crown where barnacles (now broken off) had attached themselves. The frequent occurrence here and elsewhere of this species among the refuse heaps of Knossos shows that the 'thorny oyster' was a favourite article of food.

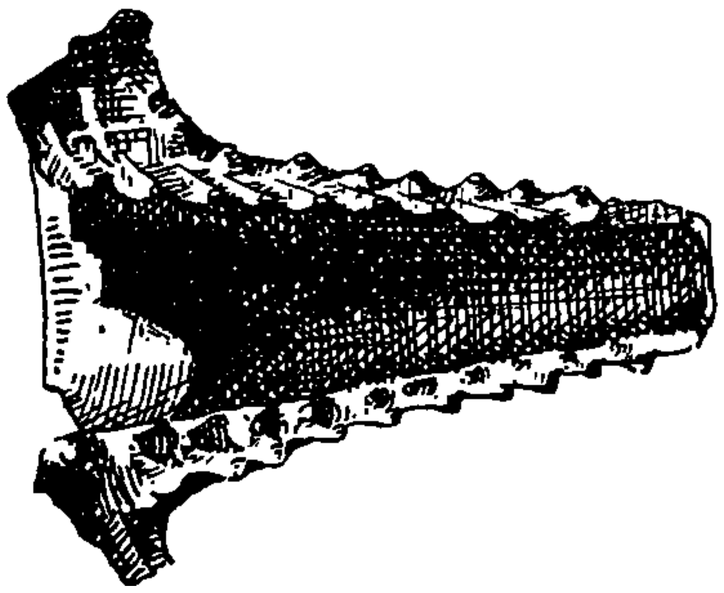


FIG. 72. SERRATED BEAK OF EWER.

Thorn-back crab.

Similar suggestions are also supplied by the 'thorn-back' crab common on the neighbouring Aegean shore, a modern carapace of which is given in Fig. 71.[1] The back of this is covered with warts like a toad, and shows thorny excrescences round the margin. Spineless sea-urchins would have afforded another convenient model, as well as the prickly ridges of the abundant pecten-shells. Such ridges are sometimes arranged herring-bone fashion as on the beaked spout, Fig. 72. On the pedestal; Fig. 73, *b* they serve as the stalks of leaves.

This 'prickle' technique used in shell designs.

That this 'barbotine' technique was due to the actual imitation of the prickly or corrugated surface of certain familiar marine objects is borne out by the fact that it was actually applied by the Minoan potters to individual designs of such. A clear instance is supplied, in the curiously composite representation of a shell type given below on a M. M. I *b* polychrome vessel from the Kamares Cave, where the corrugations of the whorls are indicated by means of rows of small prickly lumps attached to the surface (see Fig. 80, *a*).[2]

Fine combination of 'barbotine' and early polychromy on M. M. I *b* jug.

The 'barbotine' technique, thus evolved, was now combined by the M. M. I *b* potters with the brilliant polychromy that had grown up *pari passu* with it. Fragmentary examples of this are given in Fig. 73, *a–d*. Of all practically complete vessels in this combined style, the palm must still be given to the beak-spouted jug—found with parts of the pedestals of two of the polychrome 'fruit-stands' so characteristic of this epoch—of which a coloured reproduction is given on Pl. XXVIII, *a*. It will be seen that the beak shows a serrated edge like Fig. 72. On the centre of the side of

[1] This specimen, as is often the case, has been used to contain in its interior a small *ikon* or religious picture of the kind that pilgrims purchase. The subject here depicted is St. George and the Dragon.

[2] P. 114 below. The appearance of the prickles in relief is shown on the margin of the drawing.

this vessel,[1] beneath the handle, is a broad vertical band coloured with a creamy wash, and showing a typical network of ridges and miniature peaks which is really the 'barnacle work' of M.M. I *a* in a subdued form. With slightly more relief, we see the same mode reflected in the fragment, Fig. 73, *c*.[2]

Two other examples are placed in Pl. XXVIII beside this remarkable vessel to illustrate the brilliant colour effect of this barbotine style of M. M. I *b*. One (*b*) is the upper part of the *askos*, Fig. 73, *d*, and *c* a cup with a highly decorative crocus design, developed in *d*—found in the early town drain.[3]

Fine Evolution of 'Prickle' Work on M. M. II *a* Bowls.

Exquisite development of 'prickle' work on M.M.II *a* bowls.

In some cases, as already noted, the small prominences are of a prickly kind, and the upper part of the *askos* form in Fig. 73, *d*[4] and Pl. XXVIII, *b* shows thorn-like projections. These thorn-like excrescences themselves find their most exquisite form and application in the beautiful bowl belonging to the polychrome fabric of the succeeding M. M. II *a* phase (see below, p. 135, Fig. 105). The points here, though somewhat less acuminated, suggest both in their form and their rose madder hue the thorns of a wild rose.[5] In this case, too, the smaller prickles round the edge of the angular circumference and—corresponding with them—inside the bowl, attest the survival of the M. M. I *b* 'barbotine' tradition.

Lower Date of 'Barbotine' Decoration: Sporadic Survivals.

Lower date of 'Barbotine' decoration.

As to the lower date to which this form of decoration survived, some evidence both positive and negative is supplied by the Middle Minoan polychrome sherds found in Egyptian deposits of Twelfth Dynasty date. The negative evidence of course is not conclusive; but at Kahun,[6] where

[1] This jug was found in a narrow passage-way between two houses immediately S.W. of the Palace. It is illustrated in colours in *J. H. S.*, xxi, Pl. VI (Hogarth and Welch, *Primitive Painted Pottery in Crete*, p. 70). Cf., too, *P. of M.*, i, p. 179, Fig. 128. The forepart of the spout is restored.

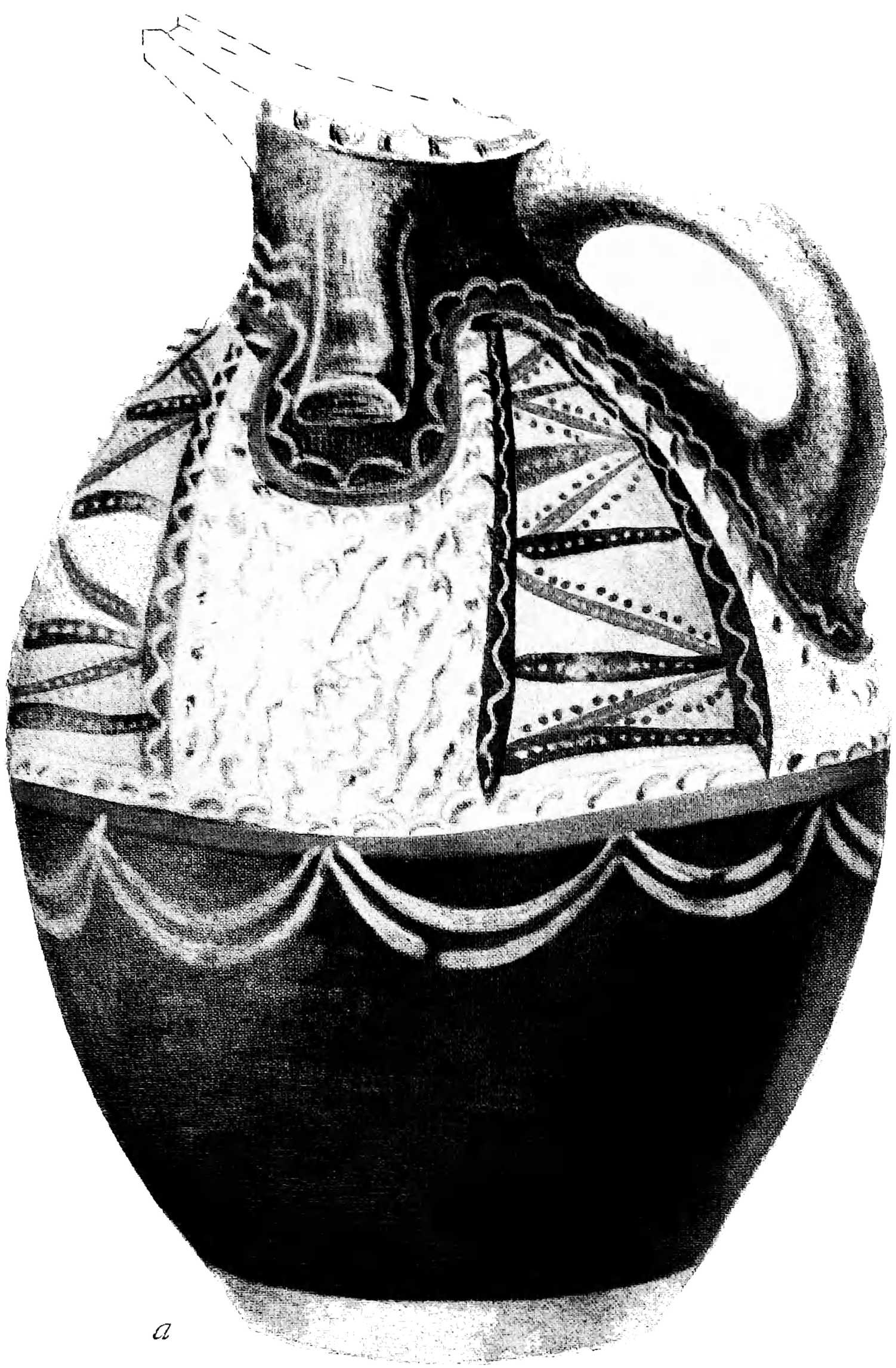
[2] Part of a cylindrical base: black glaze with small projections, recalling miniature barnacles, or limpets, some in groups of four coated with a creamy white engobe. Intervals of *vesica piscis* shape, orange red bordered by madder. This and other fragments shown in Fig. 73 are among samples from pits to the S.E. of the Palace, allowed me by the Cretan Administration in the early days of the excavation and now in the Ashmolean Museum.

[3] See *P. of M.*, ii, Pt. I, p. 369, and Fig. 205. A transitional piece, there attributed to M.M. I *a*.

[4] Pale brown ground with creamy spots and vermilion stripes.

[5] Reproduced in colours, *Knossos, Report*, 1902 (*B. S. A.*, lx), Pl. II, 2.

[6] Petrie, *Illahun, Kahun, and Gurob*, p. 9, and Pl. I; *J. H. S.*, xi (1890), p. 276, and Pl. XIV, and cf. J. L. Myres, *Proc. Soc. Ant.*, xv, 1895, p. 356, and *P. of M.*, i, p. 266. The sherds have been now fully described by Mr. E. J. Forsdyke (*B.M. Cat., Prehistoric Aegean Pottery*, pp. 91–4, and Figs. 113, 114, 115).



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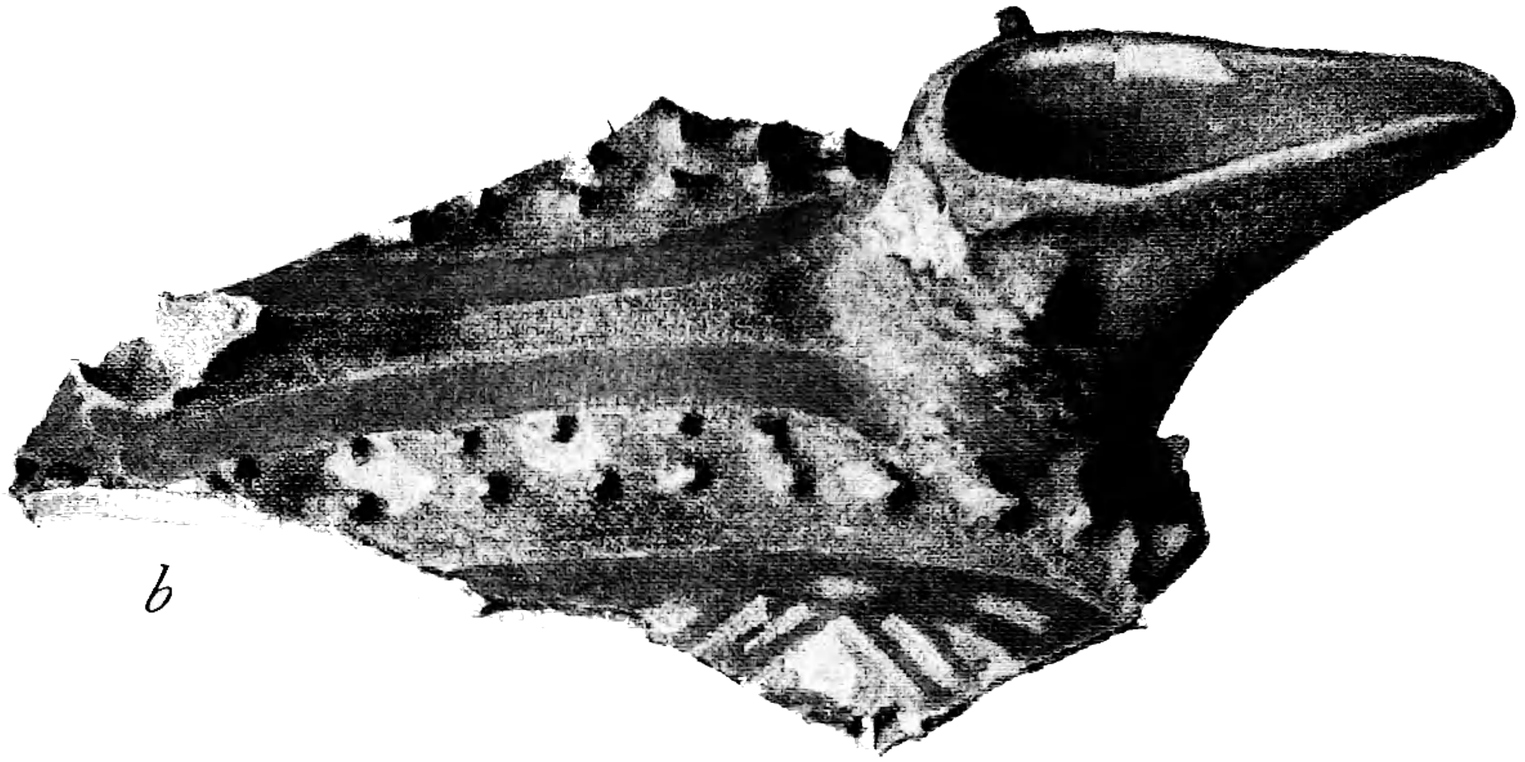
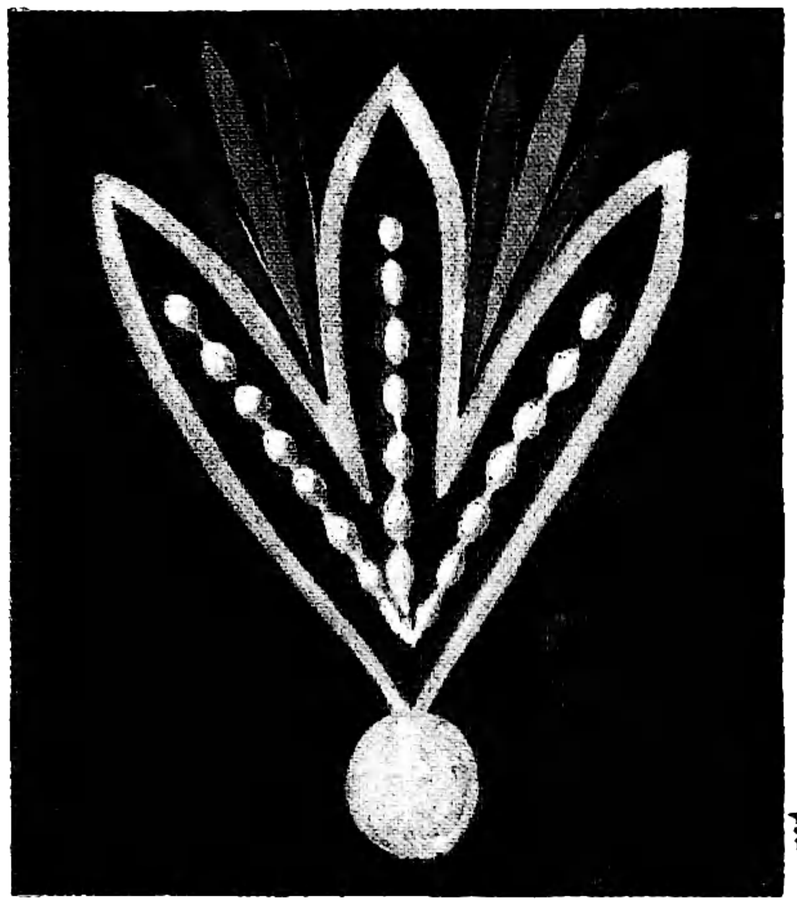
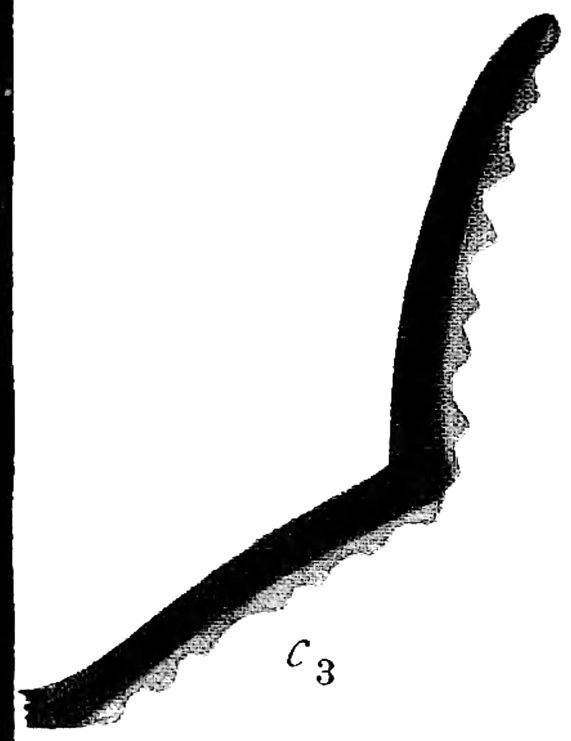


b



c_2

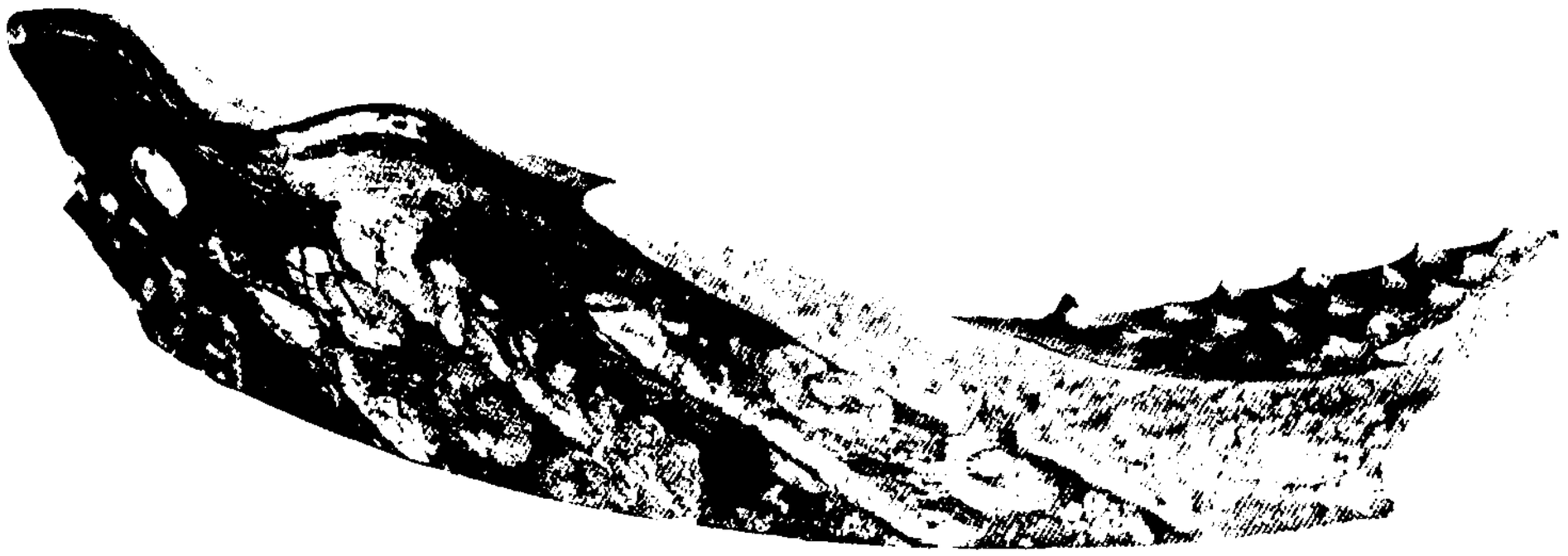


c_3

c_1

EXAMPLES OF M. M. I *b* BARBOTINE STYLE WITH POLYCHROME DECORATION

a, JUG FROM N.W. OF PALACE; *b*, PART OF L. M. I *b* *ASKOS* N.E. OF PALACE; c_{1-3}, CUP WITH CROCUS FLOWERS, EARLY TOWN DRAIN N.W. OF PALACE. (Scale *c.* $\frac{2}{3}$)



b

c

d

FIG. 73. SHERDS IN POLYCHROME M. M. I *b* STYLE WITH BARBOTINE DECORATION.

Absent at Kahun.

the period covered extends beyond the reign of Senusert II, no sherd was found exhibiting the 'barbotine' technique, neither is there any trace of it on the polychrome vase from Abydos of M. M. II *b* fabric and probably dating from the time of Amenemhat, 1849–1801 B. C.[1] On the other hand, amongst the fragments from Harageh[2] more closely dated to Senusert II's time is one, here reproduced in Fig. 74, which represents a mature stage of the 'barbotine' decoration showing two rows of small knobs linked by elongated S-shaped bands, white on the black glaze ground. To the same series belonged the interesting sherd depicting the 'tennis bat and ball' pattern of the same class as the pottery of egg-shell fabric belonging to the fully developed M. M. II *a* style.

Late example at Harageh *c.* 1900 B. C.

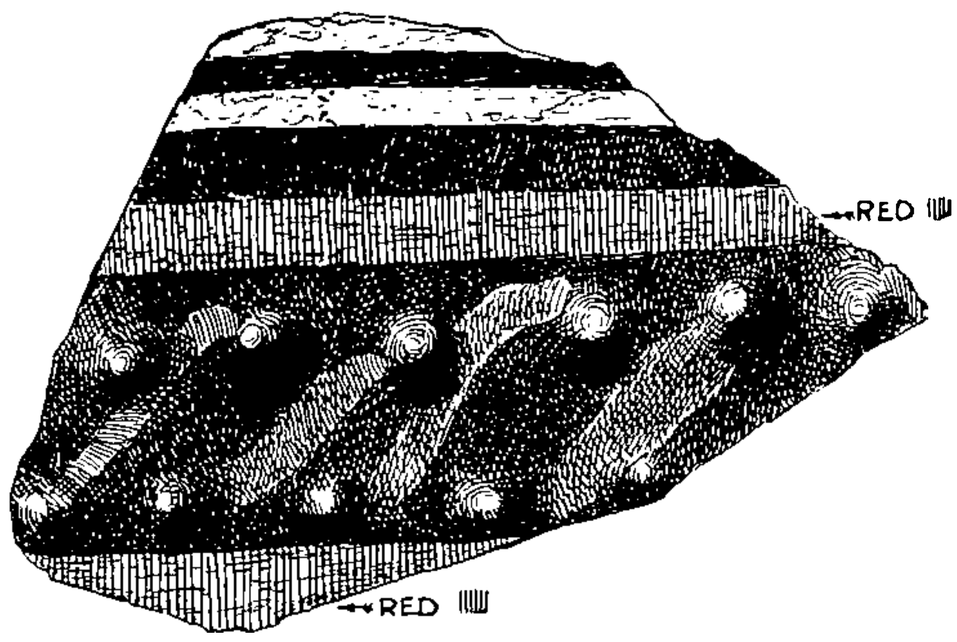


FIG. 74. BARBOTINE FRAGMENT FROM HARAGEH DEPOSIT.

Sporadic survivals.

It is to the epoch marked by the Harageh deposit, or round about 1900 B. C., that we may bring down the end of the use of the barbotine decoration as a continuous ceramic feature. That it survived later, indeed, in occasional use, is shown by a 'peg-top' 'rhyton' from Zakro of M. M. III *b* fabric,[3] the bizarre, roughened surface of which recalls the 'barnacle' work of M. M. I *a* cups. But this and a more or less contemporary class of knobbed culinary vessels may best be regarded as sporadic offshoots.

FIG. 75. MOULDED COCKLE-SHELL, HOUSE B: M. M. I*a*.

Influence of Sea-shells on Ceramic Design.

M. M. I *a* cockle-shell relief: later parallels

An interesting specimen found among the ceramic relics of the newly excavated M. M. I *a* House B makes it now possible to trace back to the date to which it belongs, a direct process of reproducing marine objects

[1] *P. of M.*, i, pp. 267–9, Fig. 199 *a*, and Suppl. Pl. IV. For the contents of the Tomb see Prof. J. Garstang, *Liverpool Annals of Archaeology, &c.*, 1913, p. 107 seqq.

[2] R. Engelbach, *Harageh* (*British School of Archaeology in Egypt*, Twentieth Year, 1923). See especially p. 11, and cf. *P. of M.*, ii, Pt. I, pp. 211–14, and Fig. 119, with Suppl. Note, p. 228.

[3] *P. of M.*, ii, Pt. I, pp. 224, 225, Fig. 129, 11. R. M. Dawkins, *J. H. S.*, xxiii (1903), p. 259, Fig. 37. The black glaze of this vessel indicates its early tradition.

our knowledge of which had been hitherto confined to remains of the latest Middle Minoan phase. This was a cockle-shell, evidently belonging to some clay vessel, that had been formed from an actual mould of the shell itself, though, as will be seen from Fig. 75, the impression—seemingly taken from a specimen with both valves connected—was not very successful. This recalls the pectens, limpets, and whorl-shells, and even a little dead crab reproduced above in Fig. 69, *h*, and which were moulded in relief by a similar process—forming part, it would appear, of the border of some flat-bottomed basin—found in the first discovered 'Kouloura'.[1] Such reliefs it will be remembered attain a very brilliant development in the faïence argonauts and cockles adorned with their natural colouring contained in the 'Temple Repositories',[2] though probably the moulds for these —like those of the flying fishes and surrounding rock-work—were wholly artificial.

'Nature moulding' as well as 'Nature printing'.

It thus appears that from the very beginning of the Middle Minoan Age the development of ceramic Art in the 'marine style' was facilitated by a system of 'Nature moulding' in the same way as at a slightly later date—M. M. II *a*—we have seen the same style in wall-painting promoted by a process of 'Nature-printing' by means of small sponges dipped in paint.[3] This method of rapid reproduction was also applied to the exterior of vases.[4]

Influence of sea-shells on evolution of ornament.

The important part that sea-shells played in the evolution of Minoan ornament can surprise no one who realizes how largely they have been turned to decorative use, not only by modern savages, but by primitive European Man from Palaeolithic times onwards. Already in the Neolithic Age, indeed, there was a regular trade route by which such brilliant exotic species as the 'Mother of pearl' shell and the gaily variegated 'Mitre-shells' reached the Mediterranean coasts from the Red Sea and Indian Ocean.[5] In Crete the huge Tridacna—of which the Red Sea is the nearest habitat—was early used as a material for carvings. Men of the Danube Valley, not content with importing Mediterranean forms,[6] ransacked a geological stratum for large cowries to serve for their personal adornment.[7] In Crete itself the marine side of the principal divinity seems to have given

[1] *Ibid.*, i, pp. 522, 523, and Fig. 381. The appearance of some of these objects was there compared with shells and fossil crustacea from the Coraline Crag.

[2] *Ibid.*, i, pp. 520–22, and Fig. 379.

[3] *Ibid.*, iii, pp. 363, 364, Fig. 238, 239.

[4] *Ibid.*, and cf. vol. i, p. 244, Fig. 184 *b*.

[5] Cf. *ibid.*, i, p. 55, and notes 4 and 5.

[6] See V. Gordon Childe, *The Danube in Prehistory*, *passim*.

[7] Personal communication from Professor M. M. Vasitch.

a special impulse to the use of shells in connexion with her sanctuaries. The *Pectunculus* shells—one of them flattened below—found at Phaestos[1] associated with a clay female idol of the squatting Neolithic type and small clay cups of offering, find their analogy at a much later date in the varied assortment of natural sea-shells, streaked and banded with brilliant artificial tints, that came to light with the faïence figures of the Snake Goddess and her votaries in the 'Temple Repositories' at Knossos,[2] and which there—as elsewhere waterworn pebbles and sherds—seem to have been strewn on the floor of her shrine. It is perhaps a suggestive fact that a female idol from Central Crete of a sub-Neolithic or Early Minoan class should have been carved out of Tridacna shell.[3]

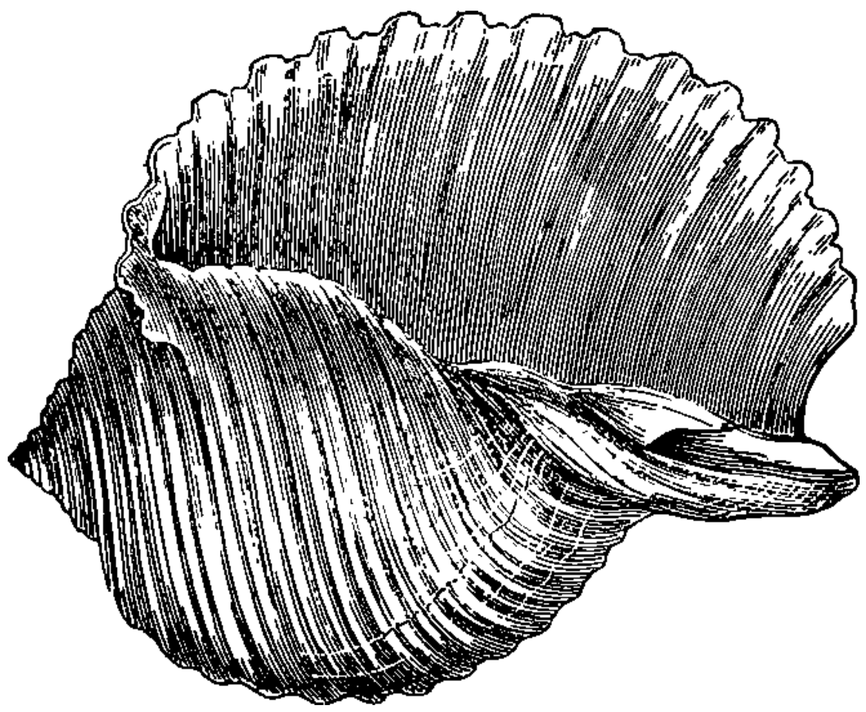


FIG. 76. *DOLIUM GALEA.*

Whorl-shells in relation to spiraliform motives. *Dolium* or 'Tun-shell' in Minoan Art.

The influence of shell motives on Minoan decorative Art has hardly received sufficient recognition. It is in fact omnipresent, though often inextricably interwoven with spiraliform patterns of old Aegean inheritance. It is a moot point whether the simple coils that appear among decorative elements before the close of the Early Minoan Age may not have been simply due to the suggestion supplied by one or other of the common whorl-shells.[4]

Amongst these, the capacious *Dolium* or 'Tun-shell'[5] seems specially to have impressed the Cretan artists. The greatest *tour de force* of a Minoan lapidary was in fact the carving out of a block of liparite—the volcanic glass obtained from the Aeolian Islands—of an almost exact copy of the higher spired variety of the shell[6] known as *Dolium perdix.*

Both this variety and *Dolium galea* (Fig. 76)—'the helmet Tun-shell—occur in the refuse pits of Knossos, and would seem to have formed a favourite article of food.[7] The latter is distinguished by its more globular

[1] A. Mosso, *Mon. Ant.*, xix (1908), p. 151 seqq.; *P. of M.*, i, p. 37 and p. 519.

[2] *P. of M.*, i, pp. 517–19, and Figs. 377, 378.

[3] *Ibid.*, p. 48, Fig. 13, 20, and cf. ii, Part I, p. 46. It was at first believed to be of alabaster as there described. The idol is in my own possession.

[4] The 'tendril' motive illustrated in *P. of M.*, ii, Pt. I, p. 196, Fig. 105, may itself, in part at least, have been due to this whorl-shell suggestion.

[5] The name of *Tunna* has been recently applied to this genus in place of *Dolium.*

[6] See *P. of M.*, ii, Pt. II, Suppl. Pl. XXXI*b*.

[7] *Dolium galea* also occurred in the 'Temple Repositories'. This is at present the commoner variety on the neighbouring coast.

form and the short coil at top, and it seems probable, as suggested below, that this species played a part in the evolution of a highly conventionalized shell-type that had a vogue in M. M. I *b*.

'Conch-shell' or Triton.

Of other shells that, owing to their size or associations, seem to have early left their influence on Minoan ceramic Art, the 'Conch-shell' or *Triton* derived a special religious value from its use by votaries to summon the divinity,[1] and models of this shell in painted clay were for the same reason included among the fittings of the 'Miniature Shrine' of M. M. II date brought to light in the Loom-Weight Area at Knossos.[2] The shell itself also found a place in actual shrines both here and at Phaestos. Part of the spire of a full-sized Triton in painted clay, also of M. M. II fabric, with white bands on a black ground, was found on the East Slope at Knossos, and a fine reproduction in marble-like stone occurred among the sacred vessels of the 'Treasury' in the West Quarter.[3] As a signet-type it occurred in the 'Temple Repositories'.[4] The whorl-shells so frequent in L. M. I *b* vases of the marine style have sometimes, owing to their elongated shape, been identified rather with Tritons than purple-shells, but the prickly prominences visible on these must be regarded as taken over from the *Murex*.[5] It is hardly necessary here to recall the persistent tradition of this compound type in the corkscrew coils on vases of the L. M. III Period.

The whorl-shell origin is already clearly recognizable in certain polychrome types—see Figs. 77, *a* and *b*—belonging to the fully developed stage M. M. I *b*, or the early part of M. M. II *a*, and in the section of a more advanced M. M. II *a* bowl (Fig. 77, *c*) we see the spirals linked into a chain and the shell mouths turned in both directions. The motive itself, when reduced to a geometrical outline, as on the M. M. II *b* bowl, Fig. 77, *c*, is assimilated with what has been above referred to as the 'half ivy-leaf' pattern in the M. M. III version, Fig. 78.

[1] *P. of M.*, i, p. 222, Fig. 167.

[2] *Ibid.*, i, p. 219, and p. 222, Fig. 168.

[3] *Ibid.*, ii, Pt. II, p. 823, Fig. 539.

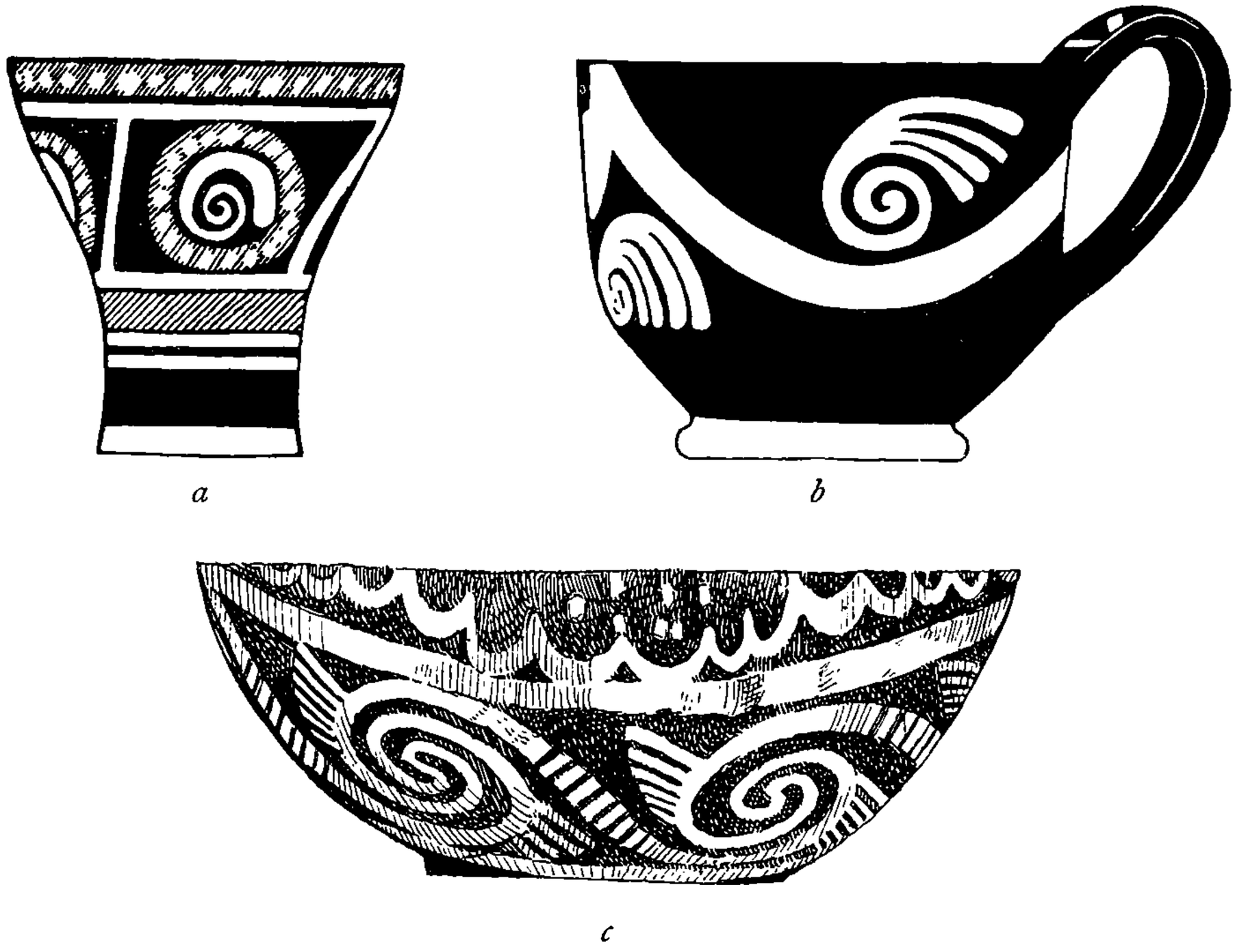
[4] *Ibid.*, i, p. 696, Fig. 518 *h* where the relative size of the two whorl-shells is shown by comparison with that of the small objects, apparently bivalve, beside them.

[5] As Professor Bosanquet (*J. H. S.*, xxiv, p. 221) states: 'The artist seems to have combined the spiky surface of the one with the elongated proportions of the other.'

Specimens of the purple shell or *Murex trunculus* occur in the Minoan deposits at Knossos. On the Island of Kouphonisi (the ancient Leukê) off the S.E. coast of Crete, and on other sites near Palaikastro, Professor Bosanquet (*loc. cit.*) found heaps of crushed specimens associated with Middle Minoan pottery, and pointing to a local manufacture of the precious purple dye. I have seen a similar heap on the shore of the Mar Piccolo at Taranto, in later times a great centre of the fabric.

Parallel decorative evolution on

This geometrical reduction of the whorl-shell type for ceramic patterns is indeed exemplfied by the primitive Art of the most distant regions. Nothing indeed can be more remarkable than the manner in which the life-history of



a *b* *c*

FIG. 77, *a–c*. POLYCHROME VESSELS WITH WHORL-SHELL PATTERNS. *a*, *b*, M. M. I *b*; *c*, M. M. II *a*.

whorl-shells in New Mexico.

a similar shell pattern in Minoan Art is paralleled in the ancient painted pottery of the Pueblo Indians and the Zunis of New Mexico. In this case the linked 'half ivy-leaf' motive, as seen in Fig. 79, *b*,[1] is based on cone-shells. In Fig. 79, *a*[2] and *c*[3] the antecedent stages are clearly illustrated. In *a*, indeed, the whorl of the cone-shell is marked by a conical projection. In Fig. 78, from Phaestos, a similar result is reached by a different path.

Generalized shell-type.

The combination of details taken from different species—illustrated above by the merging of the Triton and Murex types—is itself thoroughly characteristic of Minoan Art, and has already been repeatedly illustrated in the case of the flower types in the wall-paintings. A conspicuous instance

[1] William H. Holmes, *Pottery of the Ancient Pueblos*, Fourth Report of the Bureau of Ethnology, Washington, 1886, p. 354, Fig. 354.

[2] *Op. cit.*, p. 332, Fig. 309.

[3] James Stevenson, *Collections obtained from the Indians of New Mexico and Arizona in 1879* (*op. cit.*, Second Report, &c., p. 319 seqq., Fig. 406).

of this eclecticism is afforded by what must certainly be regarded as a compound shell-type that appears on vases representing the polychrome style of the early part of M. M. II *a*, Figs. 83–86.

On the low spouted vase (Fig. 80, *a*)[1] from the Kamares Cave we see a series of four objects clearly representing whorl-shells so far as the main part of their composition goes, surrounded with a white border, intermittently fringed.[2] The corrugation of the surface and the indication of successive whorls is given by means of small prickles, a survival of the 'barbotine' technique, and which led Professor Dawkins to recognize a *Murex* shell. The lower part of the shell, however, where the mouth should be, is quite irreconcilable with an uni-

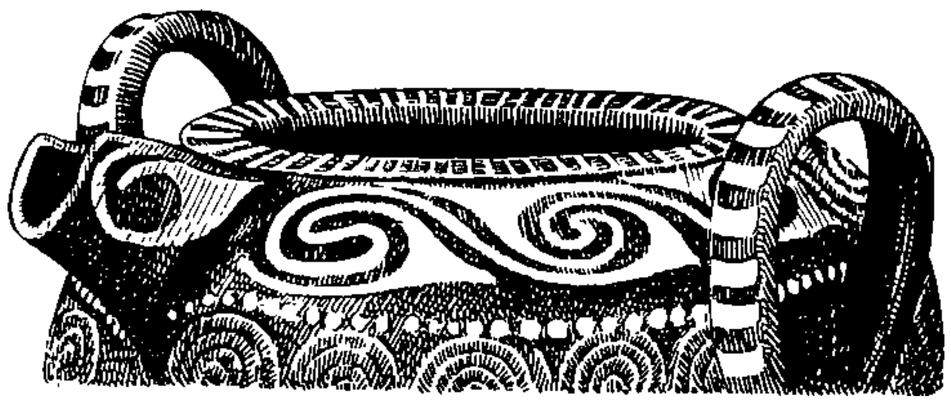


FIG. 78. M. M. III POT (PHAESTOS) SHOWING 'HALF IVY-LEAF' LINKED WITH COILS: DERIVATIVE SHELL PATTERN.

a *b* ($\frac{1}{4}$) *c*

FIG. 79. *a*, *b*, *c* CLAY VESSELS FROM NEW MEXICO SHOWING DECORATION DERIVED FROM SHELLS. *a* SHOWS CONE-SHELLS WITH PROMINENT WHORLS.

valve structure. The border here curves forward in two rounded prominences, suggestive of the twin bosses or umbos of single valved molluscs like the common cockle. Not only are bivalve and univalve elements thus combined, but a further feature appears at the apex of the design in the

[1] Excavated by Professor R. M. Dawkins from the Kamares Cave and restored and illustrated by him, *B. S. A.*, xix, Pl. IX above. See, too, *P. of M.*, i, Coloured Plate I, *d*.

[2] It was, doubtless, owing to these spiky projections and the 'corrugations' of the whorls that Professor Dawkins (*op. cit.*, p. 20) recognized *Murex* shells.

shape of a spiral offshoot that is somewhat difficult to explain as representing the apex of a shell.

This coil, indeed, recalls those regularly attached to Minoan butterflies

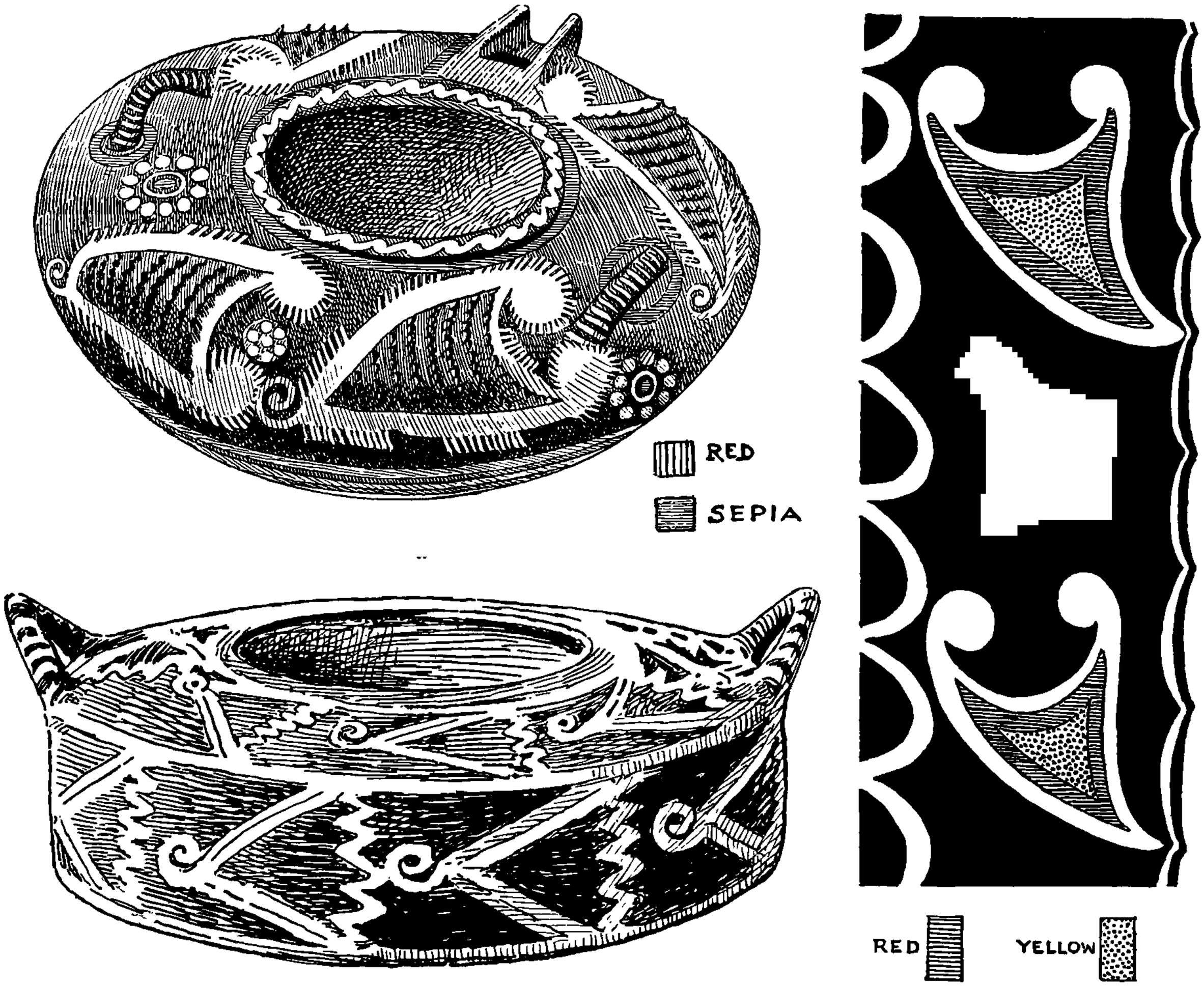


FIG. 80. M. M. I *b* POLYCHROME POTTERY WITH CONVENTIONALIZED SHELL PATTERN. *a*, KAMARES CAVE; *b*, KNOSSOS (RESTORED FROM FRAGMENTS); *c*, KNOSSOS, ON PEDESTAL OF 'FRUIT DISH'.

Perhaps derived from tun-shell.

(the antennae being omitted), and which there stand for the proboscis. Is it possible that in this case, too, we have a reminiscence of the very prominent proboscis—here misplaced—of the favourite Tun-shell of the Minoans?

The same motive as that seen in Fig. 80, *a*, occurs in a modified form on the M. M. I *b* vessel, of which a drawing, restored from fragments,

appears in Fig. 80, *b*. On the contemporary pedestal of a 'fruit-dish' (Fig. 80, *c*)—also from Knossos—though the two bosses are here retained the apex is simplified by the omission of the coil.

In this type we may recognize a conventionalized design of a sea-shell in general, embracing both the univalve and bivalve classes of mollusc.

When we recall in another field such composite plant creations as reeds terminating above in glorified papyrus tufts of varied hues and with flowers of Cretan stock inserted between their stems, it is hard to set definite limits to the eclectic system that found favour with the Minoan artists. Heterogeneous elements are in the same way united in the case of butterflies, and the gold ball seen between the 'bees' on the Mallia jewel[1] may itself represent the pellet of the Sacred Beetle.

Early Development of 'Marine Style'.

Development of 'Marine style' begins in M. M. I *a*.

What has been said above—largely the result of recent discoveries and observations—will help to set in their true perspective certain salient characteristics of the latest Middle Minoan phase.

The many-sided development of the 'marine style' which there strikes the eye, and indeed must be regarded as a dominant characteristic of that Period, is after all a more intensive manifestation of tendencies that have left their mark from the earliest Middle Minoan stage onwards. It has been noticed above that somewhat rude designs of fish and sea-tang already appear on polychrome vessels of mature M. M. I *a* date.[2]

The unique profusion of natural representations of this class visible in this later stage, modelled in porcelain as well as clay, and painted on the walls as well as on vases, engraved on gems, and actually moulded from sea-shells and other marine objects, had much earlier antecedents. The masterpieces of the 'Marine style', such as the Dolphin and Flying-fish frescoes, and small reliefs like the 'Ambushed Octopus' on the steatite 'rhyton' from Knossos,[3] surpass in naturalism anything that had yet been achieved in this branch of Art. But the clay seal-impressions found in the 'Hieroglyphic Deposit', of a date not later than the close of M. M. II, already exhibit an advance on the same lines, which at the moment of their discovery, and in the absence of any parallel designs of the same epoch, made it difficult to believe that they did not belong to the succeeding M. M. III phase.

With the definite data now before us, there is no need for further hesitation as to the relatively early date of these works. The actual

[1] See above, pp. 75, 76, and Fig. 48.

[2] *P. of M.*, i, p. 182, Fig. 131, *a*, *b*.

[3] *Ibid.*, ii, Pt. I, p. 227, Fig. 130; ii, Pt. II, p. 503, Fig. 307.

'Nature-moulding' of sea-shells is now shown to go back to the initial phase of Middle Minoan Art. The grotesque rockwork seen on the seal-impressions referred to—notably the actual grotto on that reproduced here in Fig.

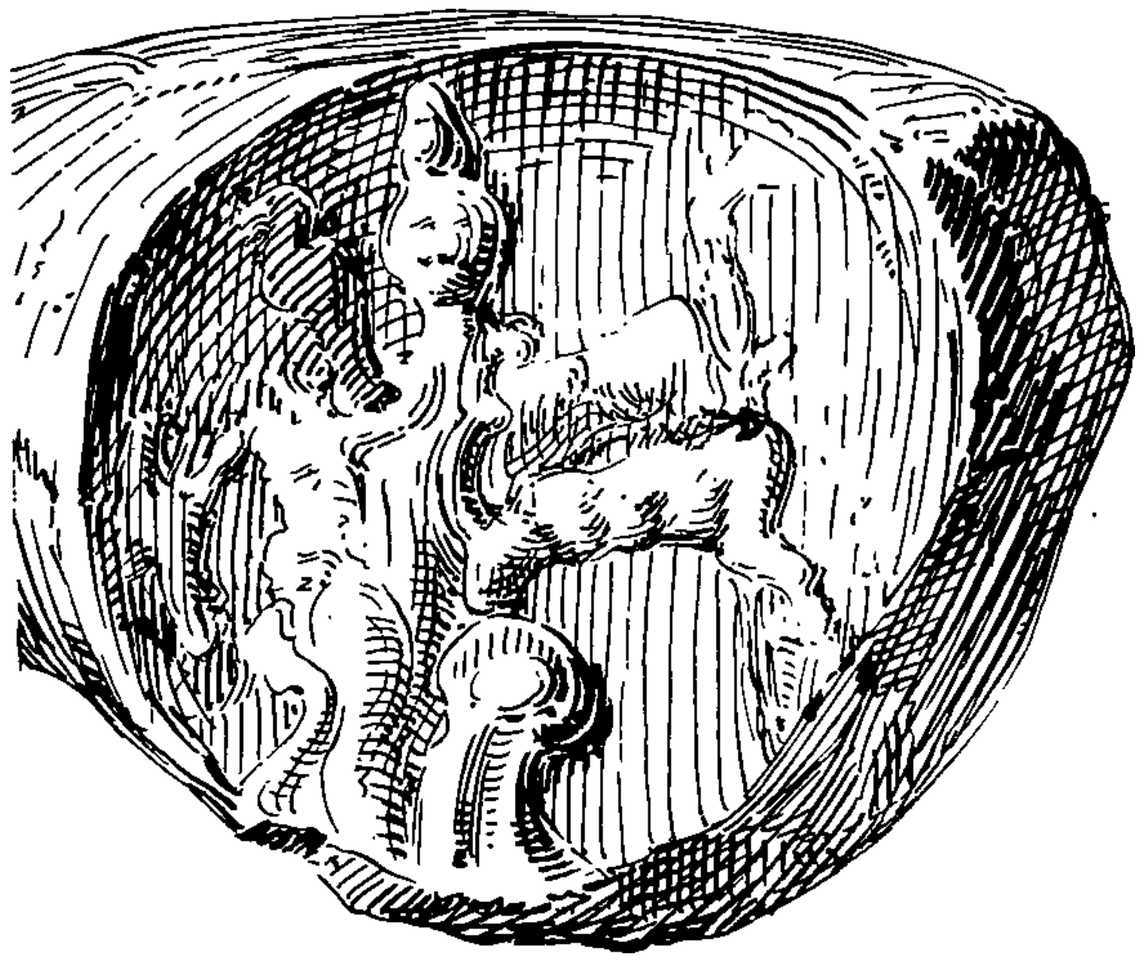


FIG. 81. ROMANTIC ROCK LANDSCAPE WITH GROTTO (M. M. II SEALING) ($\frac{4}{1}$).

81 [1]—suggesting a romantic landscape scene such as those once popularly associated with the name of Salvator Rosa—was the natural outgrowth of the imitations of marine rock surfaces long familiar with the Minoan potters. That this, with the associated 'barnacle work' above described, had a continuous history on vases down to the beginning of the Late Minoan Age, has, as we have seen, been clearly demonstrated by the peg-top shaped 'rhyton' from Zakro,[2] which, with its partial use of black glaze, preserves the earlier Middle Minoan tradition.

Cockle-shell Reliefs.

Cockle-shell reliefs on M. M. II *b* jug.

Three cockle-shells, about half life-size, are seen naturalistically moulded in relief on the flat upper rim of a miniature bridge-spouted jug found near the 'House of the Frescoes'. The rim of the vessel has a black surface with white bars, and the cockles are of a whitish colour with black streaks between their ridges, Fig. 82.[3] The vase itself belongs to the borders of M M. II and III.[4]

[1] *P. of M.*, i, p. 273, Fig. 202, *c*; ii, Pt. II, p. 453, Fig. 265.

[2] *Ibid.* ii, Pt. I, p. 225, Fig. 129, 11.

[3] See *ibid.*, ii, Pt. I, pp. 369, 371, and Fig. 206, *f* 1, *f* 2.

[4] In Fig. 206 it is placed beside vessels from a stratum in the Early Basements belonging to M. M. III *a*. It was found, however, outside this area, though near it.

This attachment of cockle-shell reliefs to the exterior of painted clay vessels—already anticipated by the M. M. I *a* example, Fig. 75—itself supplies the antecedent stage to the reliefs of the same kind on metal vases

Later example on metal vases.

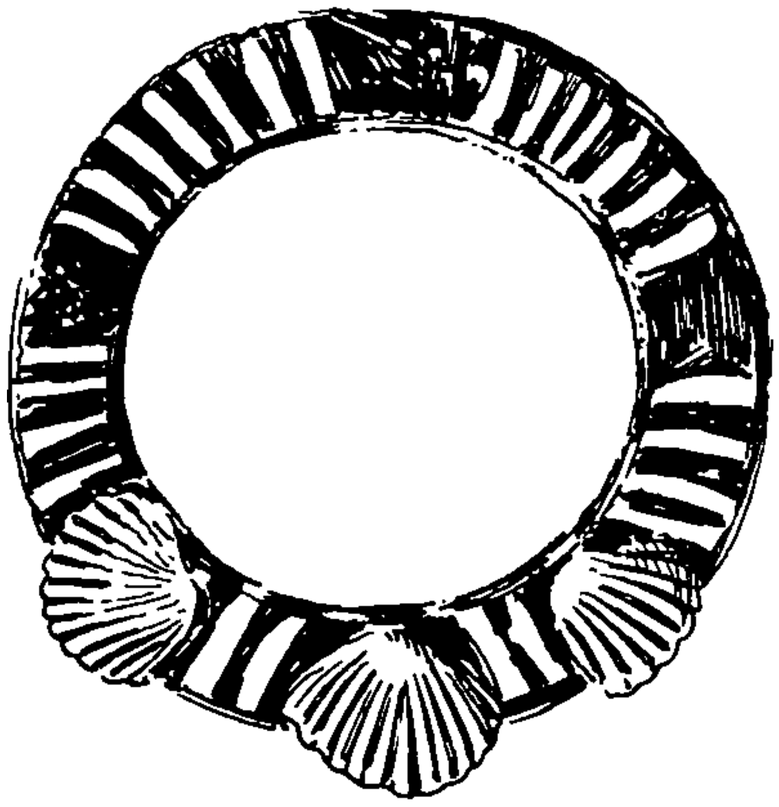


FIG. 82. RIM OF M. M. II *b* JUG WITH COCKLES MOULDED ON IT ($\frac{1}{1}$).

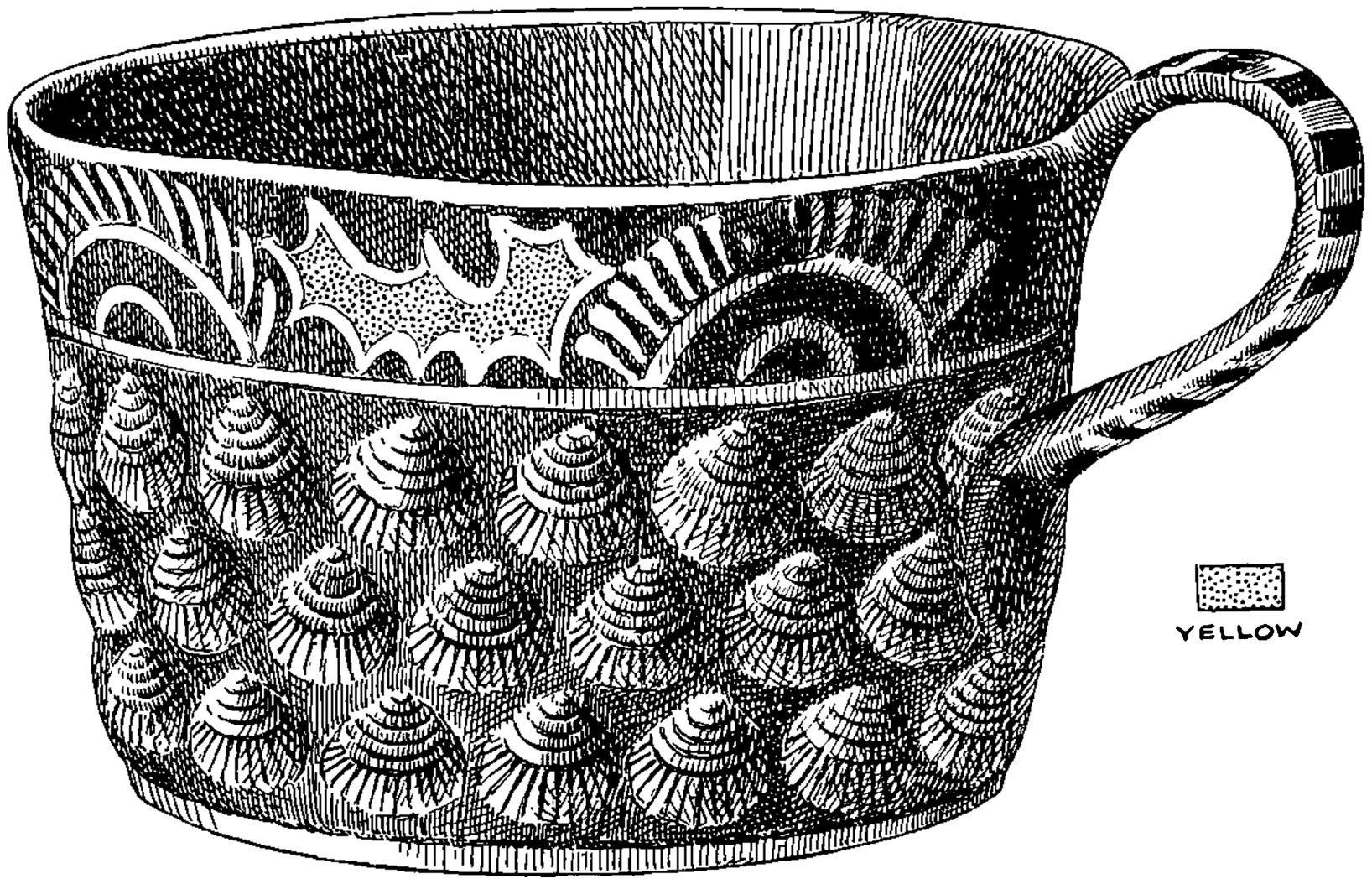


FIG. 83. LARGE POLYCHROME CUP M. M. II *a*, FROM PHAESTOS, WITH COMPOUND BIVALVE SHELLS IN REPOUSSÉ RELIEF.

of Late Minoan date. A good example is supplied by the cockles set on the handle of a bronze ewer from the 'Chieftain's Grave' of the Zafer Papoura Cemetery.[1]

A polychrome cup from Phaestos[2] had already shown that the decorative use of such sea-shells in repoussé relief was also a feature of the great ceramic phase of M. M. II *a*, and this has now been corroborated by fragments of vessels, some of them belonging to a distinctive contemporary class, found in the recently excavated 'Kouloura' 2.

Repoussé reliefs of compound bivalves on polychrome vessels.

The Phaestian specimen (Fig. 83), a large one-handled cup of a usual M. M. II type—of metallic origin—presents on its upper rim white curving sprays and between them, bizarre objects, yellow with a white border, which may best be regarded as derivatives of marine growths. The lower

Identical specimens from Knossos, Phaestos, and Palaikastro.

[1] A. E., *Prehistoric Tombs of Knossos*, i, pp. 53, 54, Figs. 52, 54 (*Archaeologia*, lix, 1906). Cf. *P. of M.*, ii, Pt. II, p. 636, and Fig. 400. It was found above the sepulchral slabs. The contents of the tomb may be assigned to L. M. II. Reliefs of cockles also occur on small faïence vases of M. M. III date.

[2] Facsimiles of this cup by Monsieur Gilliéron exist, of which one is in the Ashmolean Museum. Its 'ribbon' handle is crossed by white bars, and two white acuminated curves are seen beneath its base, a not unusual feature in M. M. II vessels.

part of the body, which in this case has a deep brown ground, is surrounded by three closely set rows of bivalve shells in embossed relief.

Knossian fragments from 'Kouloura' 3 (cf. Fig. 84, *a*, *b*), belonging to a vessel of more globular form, repeat part of a series of shell reliefs

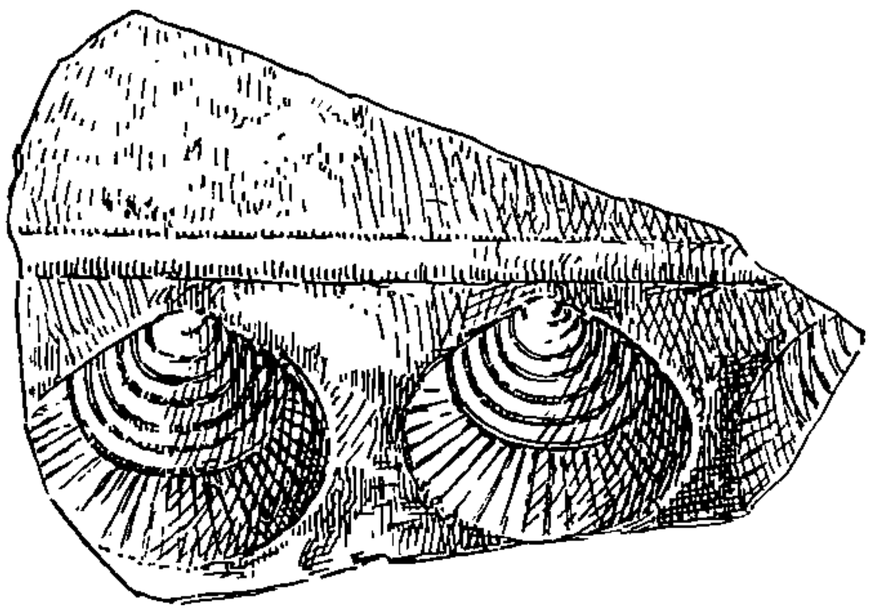


FIG. 84*a*. A FRAGMENT OF M. M. II*a* BOWL SHOWING COMPOSITE ('VENUS-PECTEN') SHELLS IN REPOUSSÉ RELIEF. KOULOURA 3, KNOSSOS.

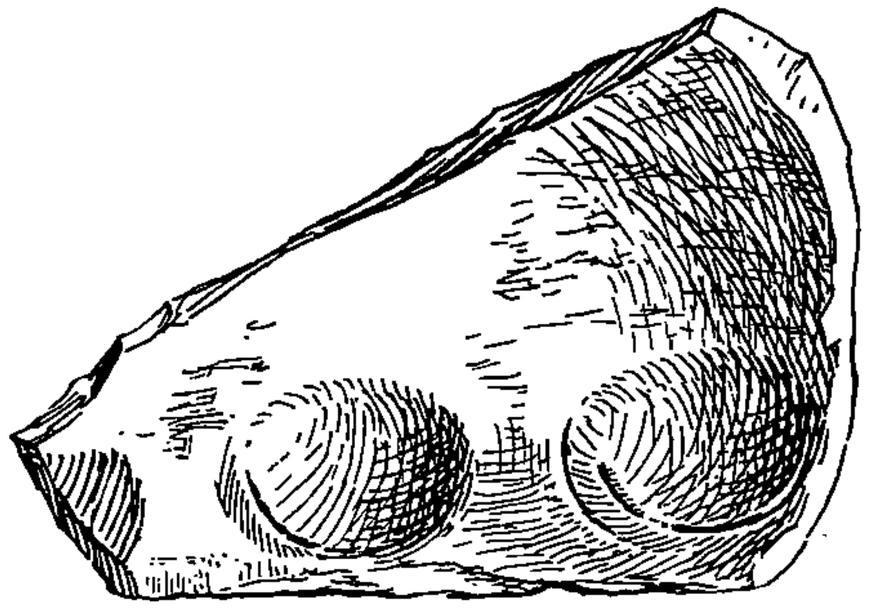


FIG. 84*b*. LOWER SIDE OF FRAGMENT SHOWING IMPRESSIONS MADE BY FINGER (WITH NAIL MARK), TO PRESS THE CLAY INTO A MOULD.

which a careful examination proves to be practically identical with those of the Phaestos cup in the minutest details.

The shell itself, of which one valve is exhibited, once more exemplifies the Minoan taste for composite creations. Its lower compartment, showing seven more or less semicircular ridges, recalls those of *Venus verrucata*, common on the coast.[1] On the other hand, beyond the outer arch of these, the remaining curved section of the surface presents radiating lines like those of a Pecten or 'comb-shell'.

Not only does the same composite formation recur on the shell reliefs of the Phaestos cup, but the ridges of the lower Venus-like compartment are the same in number—eight—as those of the Knossos fragments. As far as it is possible to judge there were in each case thirty teeth to the comb-shell. In other words, it looks as if the same matrix had been used in both cases, consisting probably of an incised steatite stamp. That this was not in quite so fresh a state when used for the Phaestos Cup is clear from certain flaws which recur on the impressions.[2] The surface of both vessels had been covered with the same dark brown glaze medium.

A fragment from Palaikastro[3] carries us from the Southernmost to the Easternmost district of Crete. It represents part of an egg-shell ware

[1] Numerous specimens of this with artificial painted bands occurred in the Temple Repositories, doubtless from the paving of a shrine (see *P. of M.*, i, p. 519, Fig. 378 : upper corner, left).

[2] The reliefs on the Phaestos Cup do not as a rule extend to the full border of the exterior curve of the shell.

[3] R. M. Dawkins, in *Palaikastro Excavations*, Pt. I, pp. 16, 17, Fig. 11*c*.

bowl, with dotted and triangular decoration in white, and embossed with composite bivalve shells of identical design, though in this case of slightly lesser dimensions and with fewer teeth to the 'comb' (Fig. 85).

The stamping of the shells had been aided by the simultaneous pressing out of the surface by a finger tip inserted within the bowl, and the inner depressions on the fragmentary specimens clearly show part of the edge of the finger-nail. These are clearly seen on the back of the Knossian fragment, Fig. 84 *b*, and recur on the inner surface of the Phaestian cup. It is to be observed that, owing to the repoussé technique inherent in the fabric, this class of vessel is of very fine pottery more or less of the 'egg-shell' class.

Distributed from Royal Knossian factory.

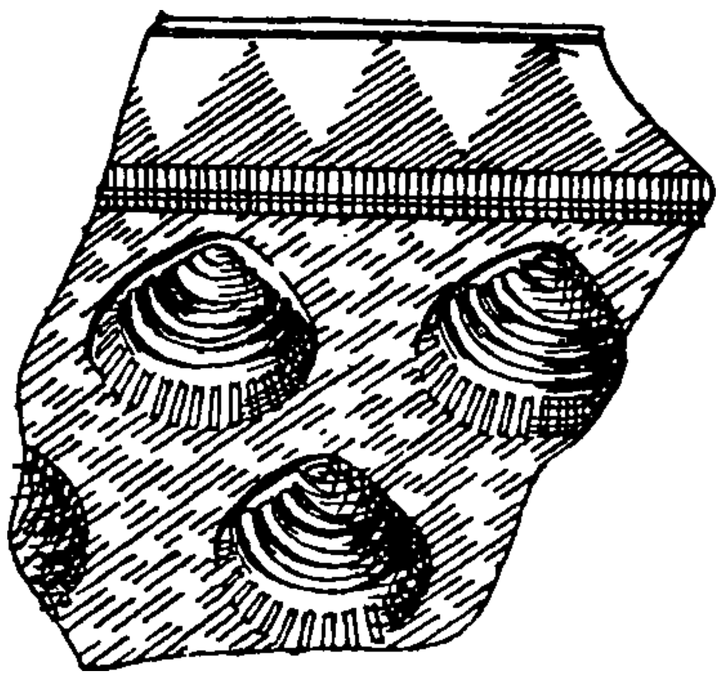


FIG. 85. FRAGMENTS OF 'EGG-SHELL WARE BOWL FROM PALAIKASTRO, WITH SIMILAR BIVALVES IN REPOUSSÉ RELIEF.

From the above observations it is clear that both vessels came from the same potter's workshop, while the secondary character of the impressions on the Phaestos cup enable us further to infer that these highly artistic works had both issued from the Royal factory of the Knossian Palace.

This conclusion is corroborated by the recurrence, in the same deposit at Knossos, of a composite form of bivalve shell of identical type among similar reliefs on the margin of a vase belonging to a well-defined local class of contemporary date. In pottery of this class creamy white painted decoration over parts of the vessels is combined in other parts with the black glaze characteristic of the best M. M. II ware, on which are painted scarlet bands or, at times, patches and foliate designs in a bright shade of Venetian red. At times, too, it is coupled with the 'tortoise-shell' pattern in its earliest M. M. II form.

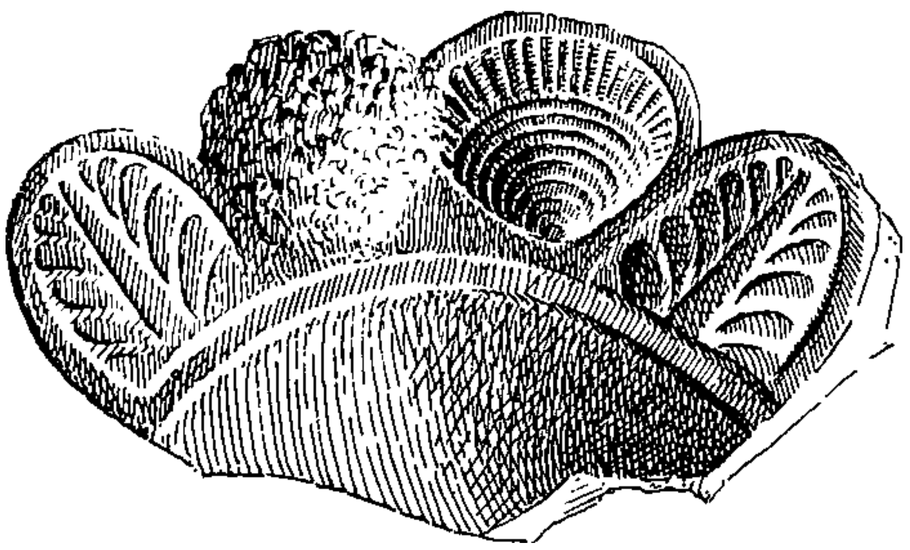


FIG. 86. FRAGMENT OF BOWL OF 'CREAMY-BORDERED' WARE (M. M. II *a*), WITH 'VENUS-PECTENS' IN RELIEF (LEFT PALMETTE RESTORED: BY IT, STUMP OF HANDLE).

On the fragment in question (Fig. 86, and Pl. XXIX, A) a composite shell of this kind is set on the outer border of a vase between a foliate ornament and what seems to have been part of the stump of a small handle such as is seen on the fragment of similar fabric, given in the Coloured Plate XXIX, B. Beyond the handle another similar foliate

Similar reliefs on a special Knossian fabric.

pattern appears. The execution of these decorative designs was carried out, both in the case of the sprays and the shells, by means of moulds, and impressed finger marks are again visible beneath each relief, in this case showing the ridges of the skin of the potter's finger.

'Creamy-bordered' Class of M. M. II *a* Polychrome Vases: Origin of 'Tortoise-shell' Ware in Metal Flutings.

The Creamy-bordered class; here first distinguished.

A few words may be here said about the peculiar class of M. M. II *a* polychrome ware in which the vessels of the type to which the above fragment A in the Coloured Plate XXIX belongs must be included. This ceramic class of local Knossian fabric does not, indeed, appear to have been hitherto distinguished.

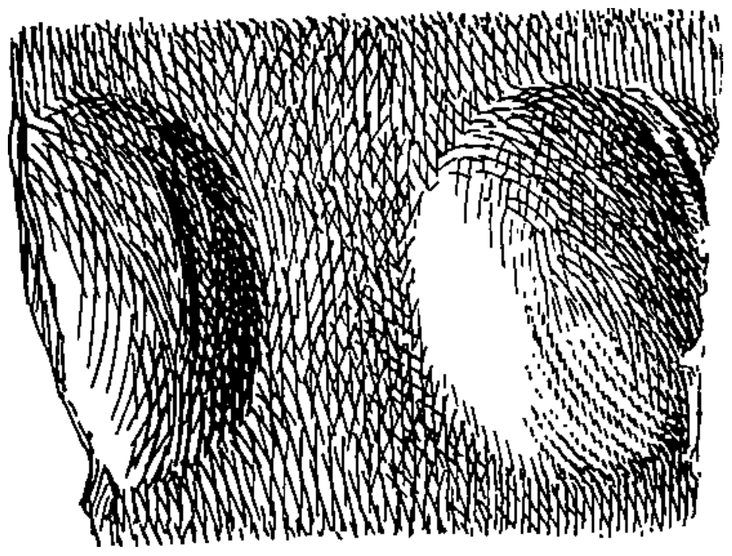


FIG. 87. PART OF LOWER SURFACE OF RIM OF BOWL (PL. XXIX, E) SHOWING IMPRINTS OF THUMB AND NAIL.

Further illustrative fragments are given in the Coloured Plate XXIX, E. Somewhat developed in the Plate is part of the rim and bowl of a vessel of the 'fruit-stand' type, supported by a pedestal.[1] Within its shallow receptacle is seen 'tortoise-shell ripple' decoration of the early M. M. II class, here suggestive of curved repoussé ribs such as seem to have radiated round the bowl in the case of some metal prototypes of this kind of dish.[2] The repoussé technique of A survives in the rim. This, which is covered with a creamy-white wash like that of the other vessel showing the bivalves in relief, has an embossed decoration in its inner section, which consists of a row of spirals. These are clearly meant to appear continuous, but they were, in fact, in each case separately impressed by a mould or stamp in the same manner as the shells, and with the corresponding depression on the under surface. As in the other case, these too show the imprint of the finger—here certainly the thumb—by which the clay was pressed into the mould, and the nail-mark is also clearly visible (Fig. 87). The lower surface of the bowl is covered with a black glaze with some traces of metallic lustre.

'Fruit-stand' type.

The 'fruit-stand' type here represented finds a parallel in the pedestalled vessel, the bowl of which, as already pointed out, reflects the flutings of

[1] Compare *P. of M.*, i, p. 184, Fig. 133, *e*, M. M. I *b*, and pp. 242, 243, and Suppl. Pl. III, *b* (under side), illustrating in this case a metallic origin with repoussé mouldings. The drawing is somewhat developed.

[2] This is illustrated by the last example mentioned in note 1. The shading of the colours in the fragment in Pl. XXIX, E, might itself be interpreted as a reminiscence of the light and shade of such repoussé 'rays'.

GROUP OF 'CREAMY-BORDERED' CLASS OF M. M. II VASES: KNOSSOS

a metal-work original. The embossed spirals themselves, in the present case, suggest metal technique. But the evidence goes farther than this. The painted decoration of the shallow bowl in the incipient 'tortoise-shell

'Tortoise-shell ripple' imitated

FIG. 88. UNDER-SIDE OF BOWL OF FRUIT-STAND SHOWING RADIATED RIDGES IMITATED FROM FLUTINGS OF SILVER-WORK.

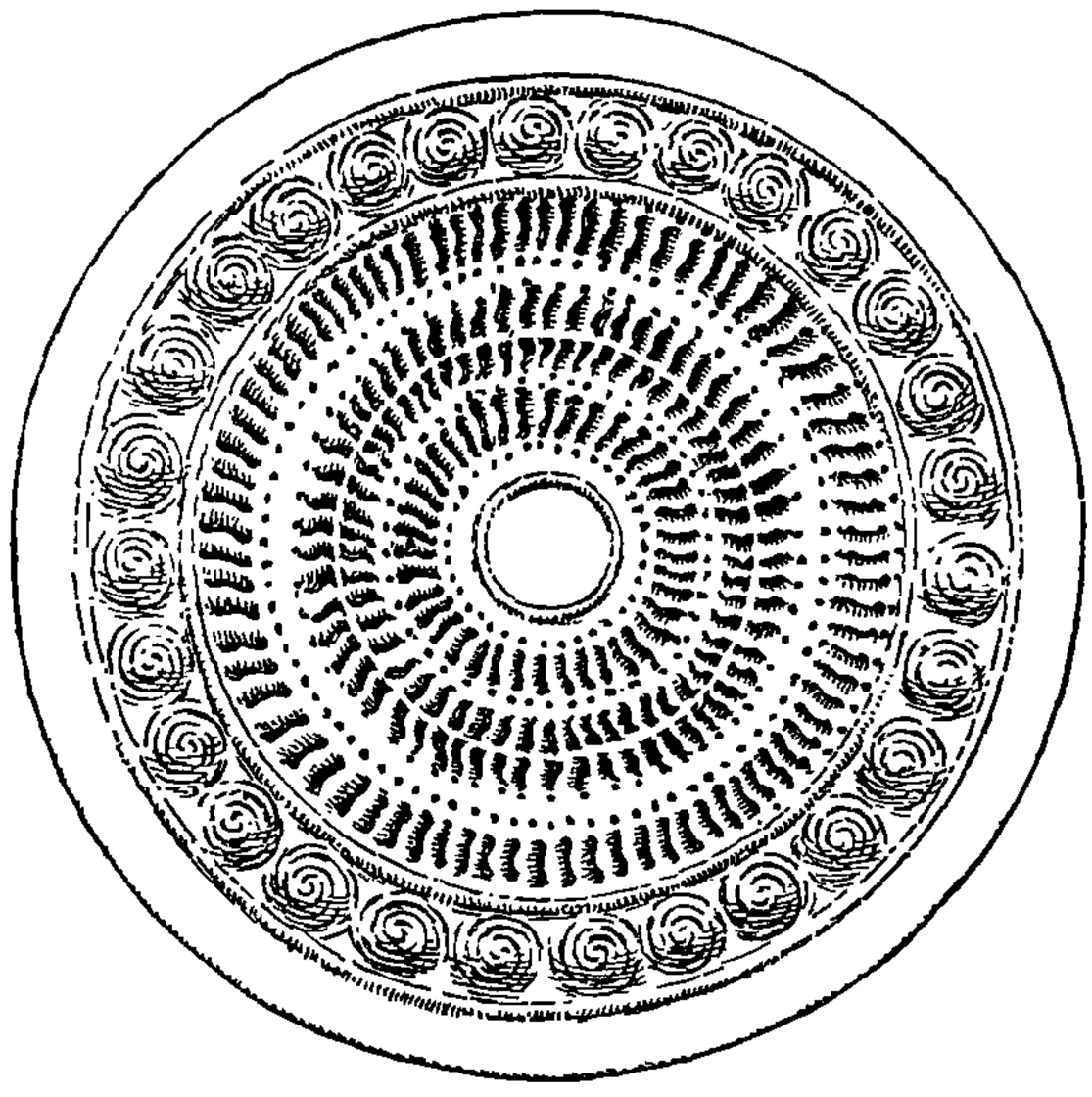


FIG. 89. BOWL OF M. M. II *a* CREAMY-BORDERED FRUIT-STAND SHOWING EMBOSSED SPIRALS ON RIM AND RADIATING INNER DECORATION.

ripple' style, showing two lines of strokes—which in relation to the inner rim of the bowl form a slight double bend—may be fairly regarded as an attempt to render, in a rigid geometrical manner, the curved flutings of metal-work, such as are more literally reproduced in the example given in Fig. 88, imitated from the bowl of what was doubtless a silver original. In the contrasted darker and lighter sections of the strokes we may, in fact, recognize an attempt to depict the actual effect of the light and shade of the original repoussé flutings—nor can this conclusion be considered at all fanciful when it is remembered that on a large painted bowl of somewhat earlier date, the rivet-studs, flutings, and keeled contour of which proclaim its metallic origin, a still bolder effect to reproduce the metallic sheen is carried out by means of black and white fields.[1]

from flutings of metal-work.

The light and dark strokes are in the present case so identically repeated and regularly espaced as to imply that the vase painter had, as not infrequently, availed himself of some mechanical process.

[1] See *P. of M.*, i, pp. 192, 193, and Fig. 139 *d*.

To complete the parallel with the bowl of the 'fruit-stand', Fig. 89' the metallic origin of which is thus apparent, the margin is adorned, there too, with a continuous row of spirals, these however being rendered in white paint.

FIG. 90. M. M. III *a* CUP SHOWING 'TORTOISE-SHELL RIPPLE' PATTERN IMITATED FROM FLUTINGS OF METAL CUP.

The somewhat angular arrangement of the upper and lower lines of strokes on the present fragment find an even nearer comparison in the flutings that surround the lower circumference of a gold goblet from the Fifth Shaft Grave at Mycenae.[1]

It will be seen that these comparisons are of great interest in their bearings on the origin of the 'tortoise-shell ripple' ornament. In this connexion it may be observed that in its fully developed M. M. III shape, it is a special characteristic of cups reproducing the same general character as the lower zone of the gold goblet from the Fifth Shaft Grave at Mycenae, though there they are rendered in a more angular fashion. The striations on Fig. 90,[2] from a Knossian deposit of that date, in fact, carry on the same story.

Cups in same 'tortoise-shell' style imitating gold goblets.

In connexion with this incipient 'tortoise-shell ripple' ware may be mentioned another somewhat parallel class of decoration of a new character, of which evidence was brought out by the present excavations. In 'Koulouras' 2 and 3 there occurred several more or less fragmentary specimens of vessels of advanced M. M. II technique, showing a kind of waved sepia ornament of varying shades on a pale, at times highly polished, ground of a class that had not yet been distinguished. This form of decoration, which in its brush technique of greater and lesser pressure shows some analogy to the 'tortoise-shell ripple ware', is illustrated in Figs. 93, 94, and seems to represent an attempt to reproduce the veins, and to a certain extent the colour effect of fine alabaster, clearly of the Egyptian class.

Alabaster veins imitated.

[1] See the fine reproduction in Professor G. Karo's *Schachtgräber von Mykenai*, Pl. CXXIV, No. 628, Text, p. 122. Cf. *P. of M.*, i, p. 242, Fig. 183 *a*, 7.

[2] Reproduced from *P. of M.*, i, p. 593, Fig. 435, above.

As a good example of this material, though belonging to a much earlier date, and itself found some years since North-West of the Palace site, the small gallipot, Fig. 91, is here delineated. This vessel is in fact of a form

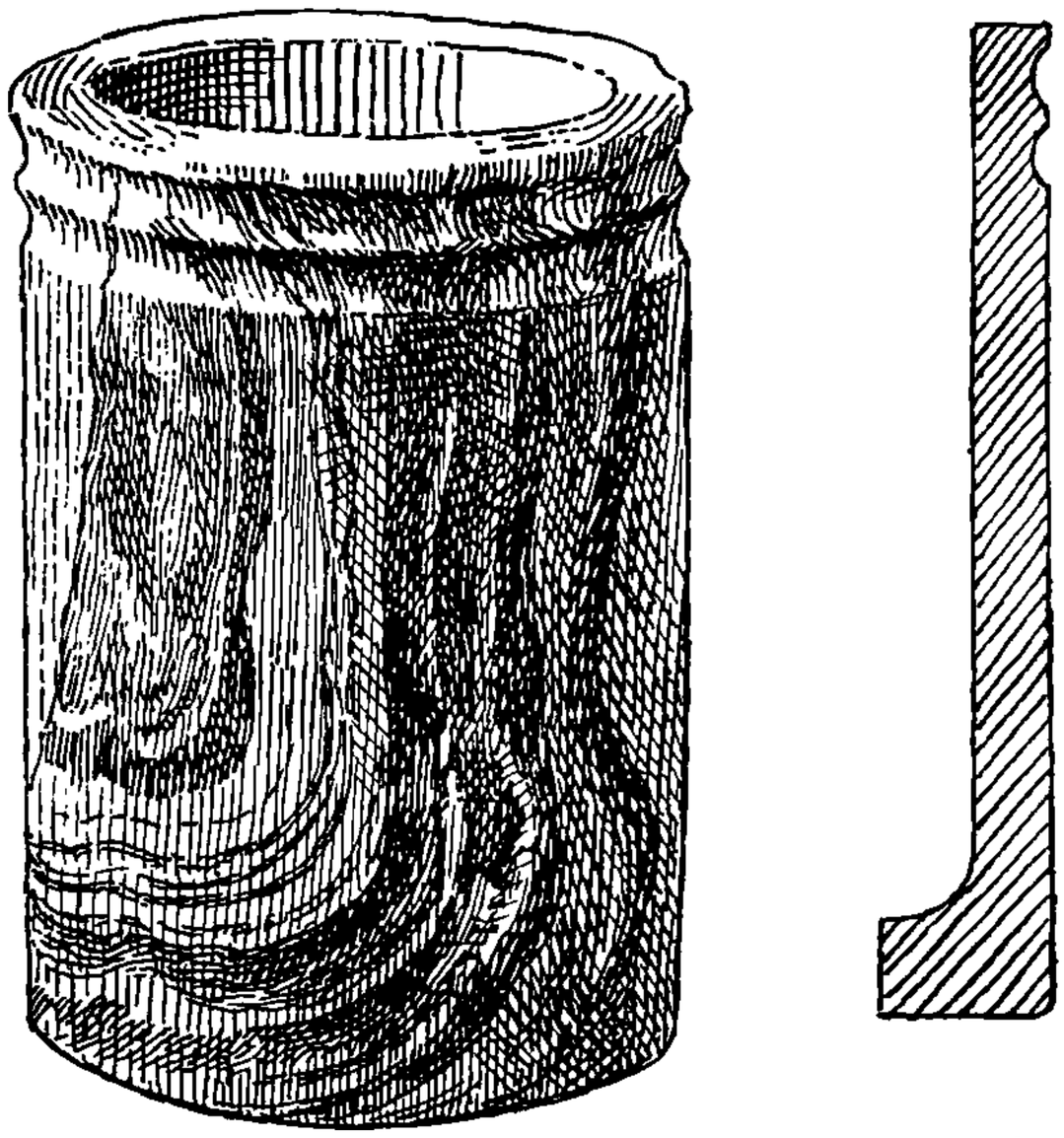


FIG 91. ALABASTER GALLIPOT OF LATE PREDYNASTIC TYPE, FOUND N.W. OF PALACE SITE, KNOSSOS.

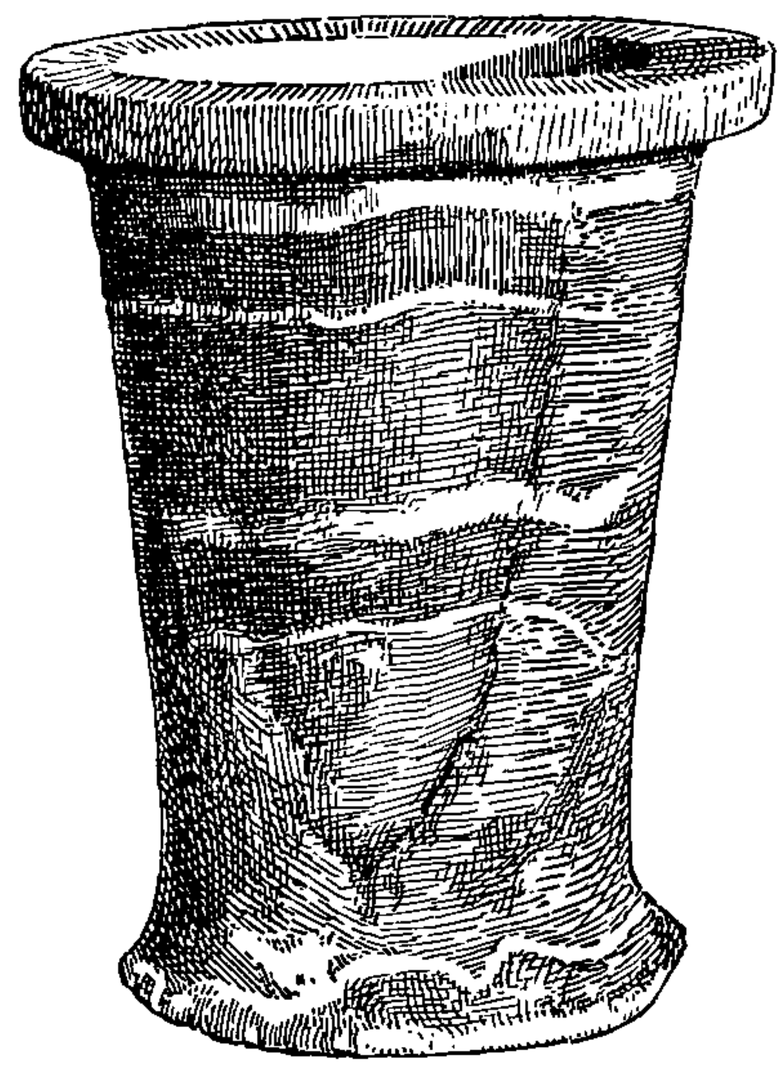


FIG. 92. IVTH DYN. TYPE FROM SAME REGION (CF. *P. OF M.* ii, PT. I, P. 16, FIG. 6).

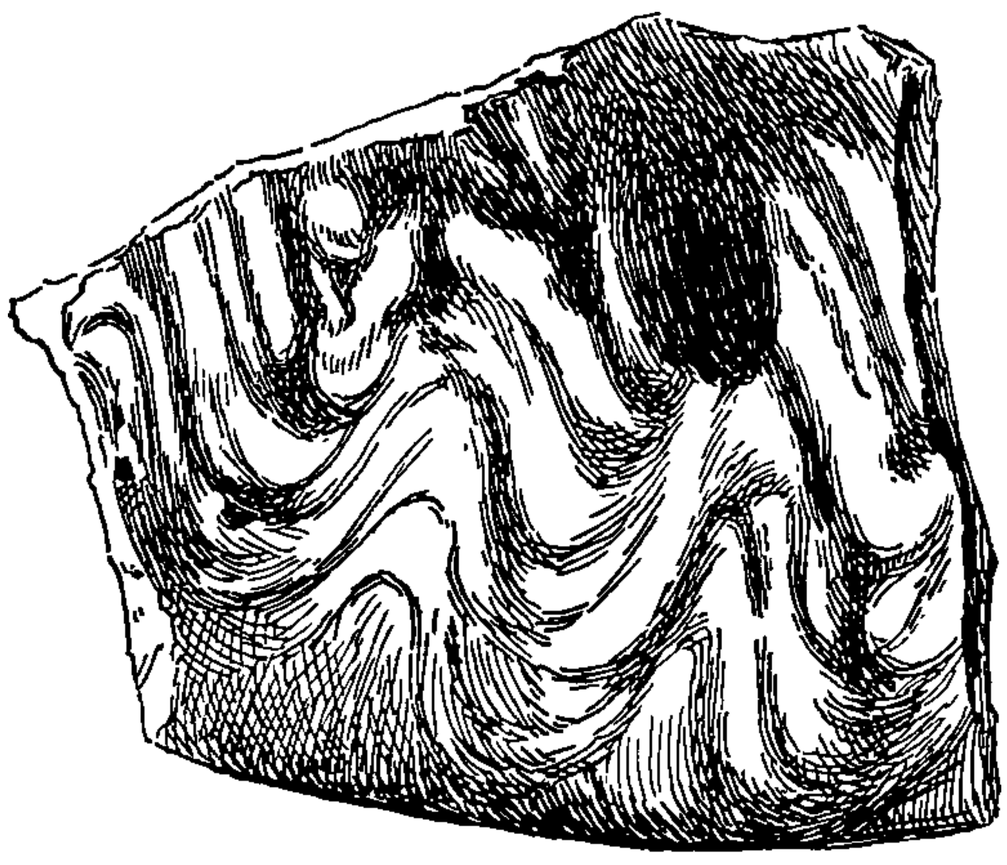


FIG. 93. PAINTED FRAGMENT FROM 'KOULOURA'.

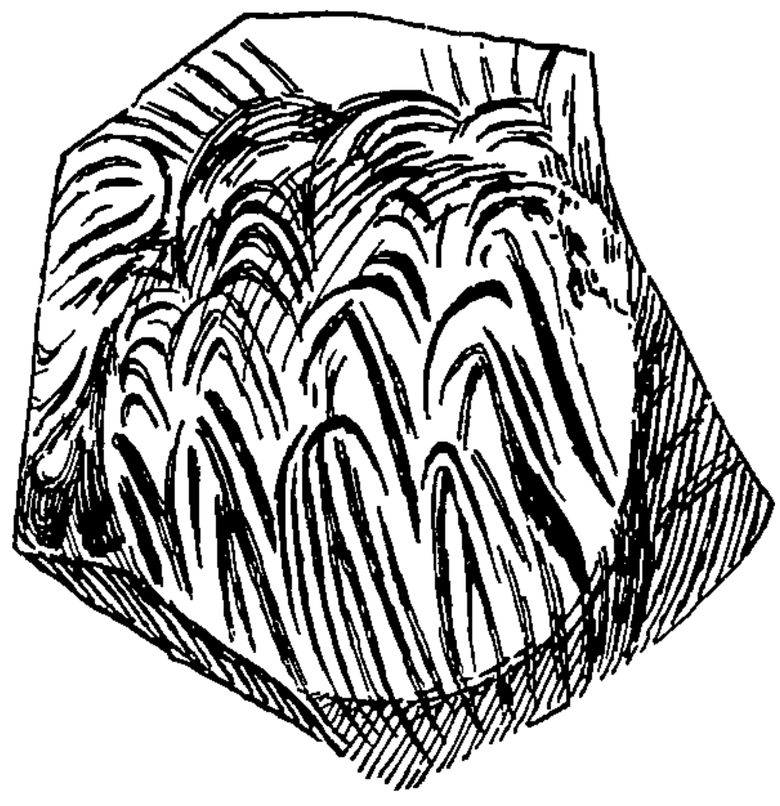


FIG. 94. BASE OF BOWL, 'KOULOURA'.

closely parallel to the pot, in that case of mottled limestone, from the transitional Neolithic House A of the Central Court at Knossos, and of which a restored drawing has been given in Volume II of this work. The

ridge round the centre of the grooved border of this pot answers to a degeneration of the rope moulding often seen round that of proto-dynastic specimens. As a contrast to this Fig. 92 from the same region is here reproduced, resembling a type presenting the seal of Khafra of the IVth Dynasty.[1]

Painted Terra-cotta Flower.

Petalled vase and flower.

In B of Pl. XXIX we find a fresh illustration of the taste for foliated or floral designs on the border, also visible in the palmette-like motive beside the shell in A. The rim is coated in the same manner with a creamy-white wash. The handle that here springs from the rim shows a black glazed ground with white cross marks, and in front of its base—lending colour to the whole—is a flat vermilion knob, the derivative of one in metal.

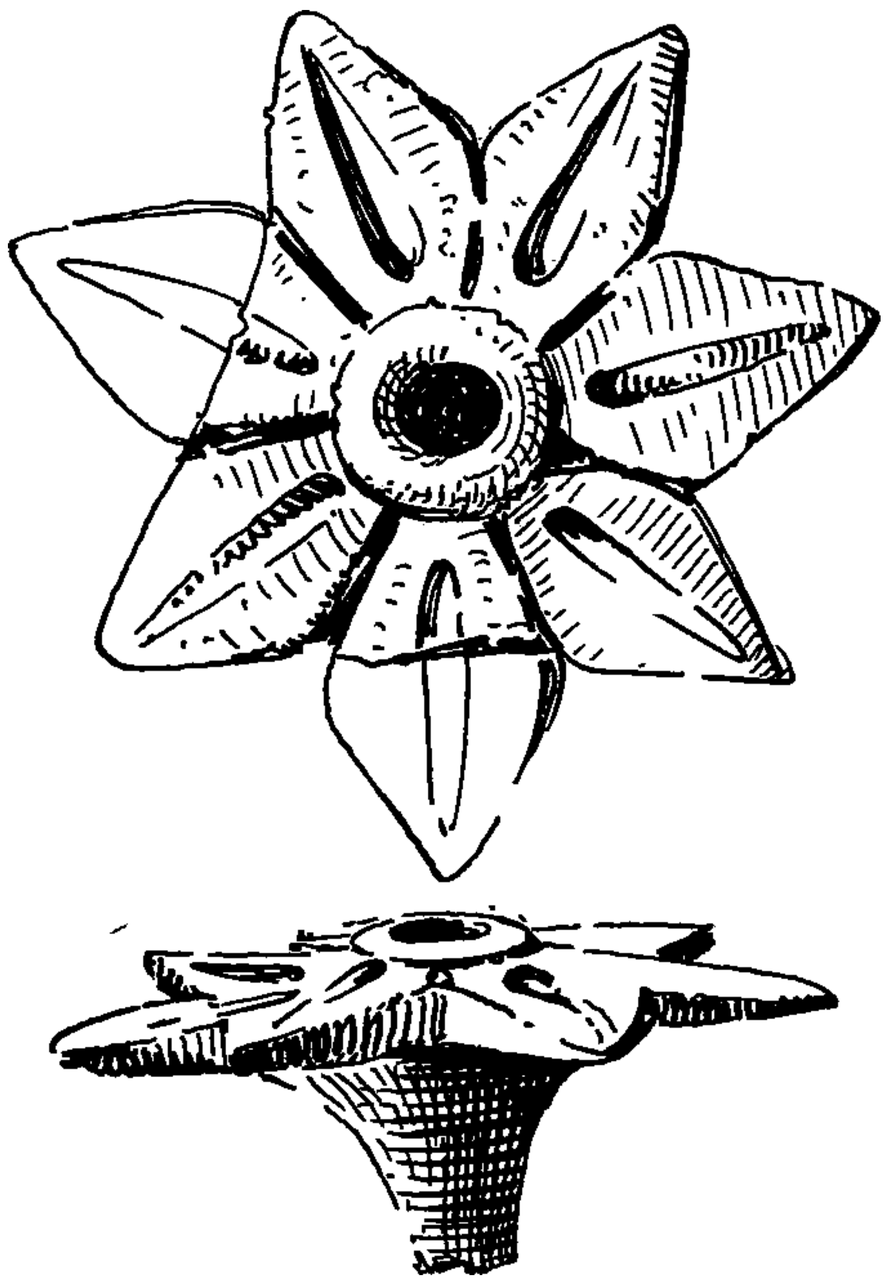


FIG. 95. TERRA-COTTA FLOWER WITH COLOURED WASH ($\frac{1}{1}$).

The companion piece, Pl. XXIX, C, and Fig. 95 clearly represents a seven-petalled flower. It must originally have stood out as an attachment to some other object in the same terra-cotta material. The grooves of its petals still retain remains of the creamy-white wash that originally covered them, while the raised ring round its deep central cavity has still attached to it part of a Venetian red coating.

Parallel suggested by Sumerian 'Flower Cone' mosaics.

This terra-cotta flower at once suggests a curious resemblance to a class of objects of clay and stone, which recent excavations on Sumerian sites and notably at Ur and Erech have brought to light, and to which the name of 'flower cones' has been given (Fig. 96).[2] These objects date on those sites from about the Twenty-ninth Century B. C. As we now know, they had formed brilliant mosaics on the walls.

[1] In the Candia Museum; from the same origin. For the Khafra pot (*c.* 2500 B.C.) see Garstang, *Tombs of Third Egyptian Dynasty*, Pl. 31, R. 92.

[2] *Ur Excavations*, vol i, *Al Ubaid*, by H. R. Hall, C. Leonard Woolley, C. J. Gadd, and Sir Arthur Keith (1927), Pl. XXXIV, 1, and cf. Pl. XXX, 1 (cf. pp. 81, 82). Still better examples of these cone mosaics have now been brought out by Jordan and Noldeke at Uruk (Erech).

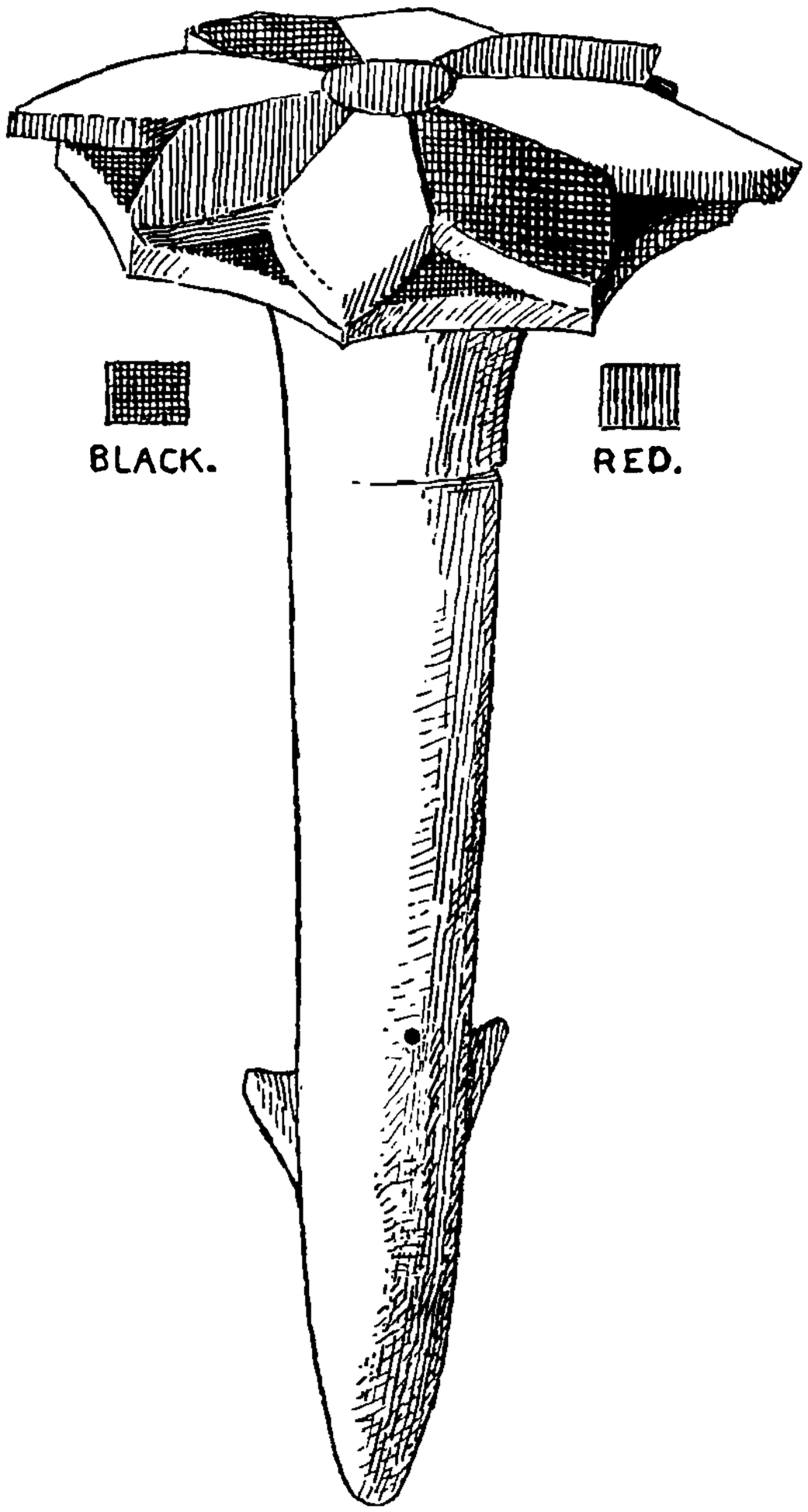


FIG. 96. 'FLOWER CONE' FROM AL 'UBAID ($\frac{1}{2}$).

In spite of the longer stalk of the Chaldaean examples, the points of resemblance are too great to be passed over. Mr. C. J. Gadd informs me that a discovery of objects of a similar kind, but of considerably later date—approaching the middle of the Third Millennium before our era—has now been made at Kirkup. This would render a comparison with the Minoan example the more legitimate.

Floral models in jewellery.

As regarded from the Minoan point of view, we might be inclined to trace the suggestion of metal-work. This artificial flower, with its corolla springing from a deep central cup, was, as above noted, obviously designed for attachment, and is really the translation into clay of a class of object which in jewellery had a very ancient Minoan tradition. It goes back indeed to the exquisite gold ornament in the shape of flowers and leaves found by Seager in the Mochlos tombs of E. M. II date, but here again we are faced with Sumerian parallels.[1]

More solid and beautiful is the gold pin surmounted by a flower of M M. I*a* date from the remarkable sepulchral sanctuary recently explored by the French excavators at Mallia, of which an illustration has already been given.[2] That such ornaments survived to quite late Mycenaean times is shown by the gold lilies found in bee-hive tombs at Dimini and Volo. But even in these cases we are led back to Sumerian prototypes. This Minoan jewellery has now been shown to find a still earlier parallel in the varied gold ornaments of floral and foliate

[1] Richard B. Seager, *Exploration in the Island of Mochlos*. See, especially, p. 26 seqq., and cf. *P. of M.*, i, pp. 96–9, and Figs. 67 and 69.

[2] See above, p. 75, Fig. 47, and note.

types that already graced the coiffures of the Queens and Court Ladies of Ur before the beginning of the Third Millennium before our Era.[1][2]

Beaked Ewers in 'Creamy-bordered' Style.

Beaked ewer in 'creamy-bordered' style.

A small 'beaked' ewer,[1] Pl. XXIX, D, has greatly supplemented our knowledge of certain fragments brought to light in the newly excavated 'Koulouras', as well as within the Palace itself, and clearly of the same class. The high-beaked spout of the ewer, as well as the ring round the base of the neck, are characteristic features.

Although, owing to the superficial position in which it lay, the surface of the ewer had been a good deal weathered, a careful examination of the traces of the original coloured designs on the body, which is here fully preserved, have made it possible to supply its full restoration as shown in Pl. XXIX, D. The highly relieved ring here, seen also on two fragmentary specimens, is coloured a bright Venetian red, approaching vermilion where best preserved. Beneath this the greater part of the body seems to have been covered with a black glaze, showing white horizontal rings and, between two of these, a chain of white spirals terminating in disks of the same ruddy colour. The neck of the ewer is washed in front with the usual creamy white of this group, contrasting with a black band running down its back. On the outer border of the 'beak', as on two of the fragments, there appears on each side a curious roll, coloured in all cases with the same bright red, traces of which also occur in the spring of the handle in the more complete example.[3]

Two of the fragments present on the neck and the forepart of the beak a foliate spray in the same bright red, which much recalls the dark brown sprays on the faïence cups from the Temple Repositories.[4] The upper part of the vases to which these fragments belong is restored in Pl. XXIX, F. The painted decoration preserves the tradition of the fine M. M. II polychromy, coupled with a black glaze ground. In other words the class cannot be later than M. M. II *b*, and supplies the antecedent to the closely allied faïence fabrics of M. M. III.

M. M. II polychrome vases

That the type represented by these was in fact rooted in the ceramic traditions of the acme of the M. M. II Period may be gathered from more than one link of connexion. Remains occur of a parallel class of vases,

[1] Found on the East slope of the Palace site: Candia Museum.

[2] See C. Leonard Woolley, *Ur Excavations*, Vol. ii, *The Royal Cemetery*: see esp. Pls. 127–9, 135, 136 and compare the pendant sprays and attached leaves and flowers in gold-foil of E.M. II date (Seager, *Mochlos*, p. 31 seqq. and Figs. 10, 11. Cf., too, *P. of M.*, i, p. 98, Fig. 69).

[3] Compare, too, Pl. XXX, A.

[4] *P. of M.*, i, p. 499, Fig. 357, *b*, *c*.

larger by about one-quarter in their dimensions, and exhibiting not only the best quality of lustrous black glaze, but the vermilion red and white decoration that characterizes the best Age of ceramic polychromy. Whether they had the same beaked mouths is uncertain, but the spring of the neck is surrounded in the same way by a raised ring, generally red.

with similar neck-ring.

It is safe to say that in the case of the vessels with the raised rings round their necks, the ultimate originals are to be sought in fine metal-work. Of the beaked type with the raised ring round the base of the neck, we have a good example of the same general character in the silver ewer from the Fourth Shaft Grave at Mycenae,[1] though the 'rolls' at the sides of the mouth are wanting. An approach to the same type, but with blunter beak and with the neck-ring modified, is seen in the little gold ewer from Grave III[2] with a spiraliform decoration in repoussé work round its body, a feature of which we may trace a reminiscence in the white spirals on the Knossian ewers, Pl. XXIX, D, F. In faïence we still see their original relief preserved in an ewer from the 'Temple Repositories'.[3]

Metal-work origin of this class of ewer.

The whole of the above 'creamy-white bordered' group—here for the first time put together as a special fabric, of a class belonging to the mature M. M. II *a* phase and the succeeding epoch—must in fact be recognized as based on silver-work originals.

Creamy-bordered class based on silver-work.

The group itself, indeed, only represents one branch of the many types of fine M. M. II pottery—including in particular the 'egg-shell' ware with its metallic lustre—that owed its origin to the attempt to imitate gold and silver vessels. At Knossos we cannot, as at Mycenae, supplement our knowledge from the contents of royal tombs, and the Palace itself, impoverished in its final stage, pillaged at the time of its destruction, and later by the treasure-hunters of four-score generations, had little left to offer of objects in precious materials. These reflections in painted clay of the earlier treasures of the Priest-kings[4] have therefore a peculiar value.

Of the beauty and variety of the silver ware of the period to which they belong, the ceramic imitations exhibited in Pl. XXIX and the above figures may give some idea. We note the finely foliated borders, the suggestions of curved flutings, and—as is shown by the vermilion-painted rivet head of Pl. XXIX, B—apparently of gold-plated studs. In particular we obtain evidence of a predilection for reliefs of sea-shells in the original

[1] Schliemann, *Mycenae*, p. 243, Fig. 353: 'Silver Flagon'; G. Karo, *Schachtgräber von Mykenai* (1930), Text, p. 111, Fig. 40.

[2] Schliemann, *op. cit.*, p. 232, Fig. 341; Karo, *op. cit.*, Pl. CIII, Text, p. 54, No. 74.

[3] *P. of M.*, i, p. 498, Fig. 356.

[4] *Ibid.*, p. 243 seqq.

metal-work, whether embossed by means of repoussé technique, or as either actually moulded on the surface, or attached to it as an incrustation.

Argonaut Reliefs and their long Ceramic Tradition.

Argonaut reliefs from 'Kouloura' 2.

The very naturalistic Argonaut relief from Kouloura 2—Fig. 97—clearly also belongs to the ceramic group above described. The shell, which is perfectly preserved except for a piece of its lower margin and 'ear', was in fact originally covered with the same creamy-white wash that characterizes the whole class. In this case the relief had been moulded separately, and afterwards attached to the surface of the almost flat border of some vessel, though the junction of the two surfaces was very imperfectly attained. The outer curve of the shell in part follows a slight rounded projection of the rim on which it is superposed, and upon which traces of the same creamy-white wash are also visible. This border may well have belonged to a vessel of the 'fruit-stand' type already referred to. Whether the tentacles of the Argonaut had been rendered in any way on this margin must remain uncertain, but the position in which the shell is placed makes it possible that these also had been reproduced.

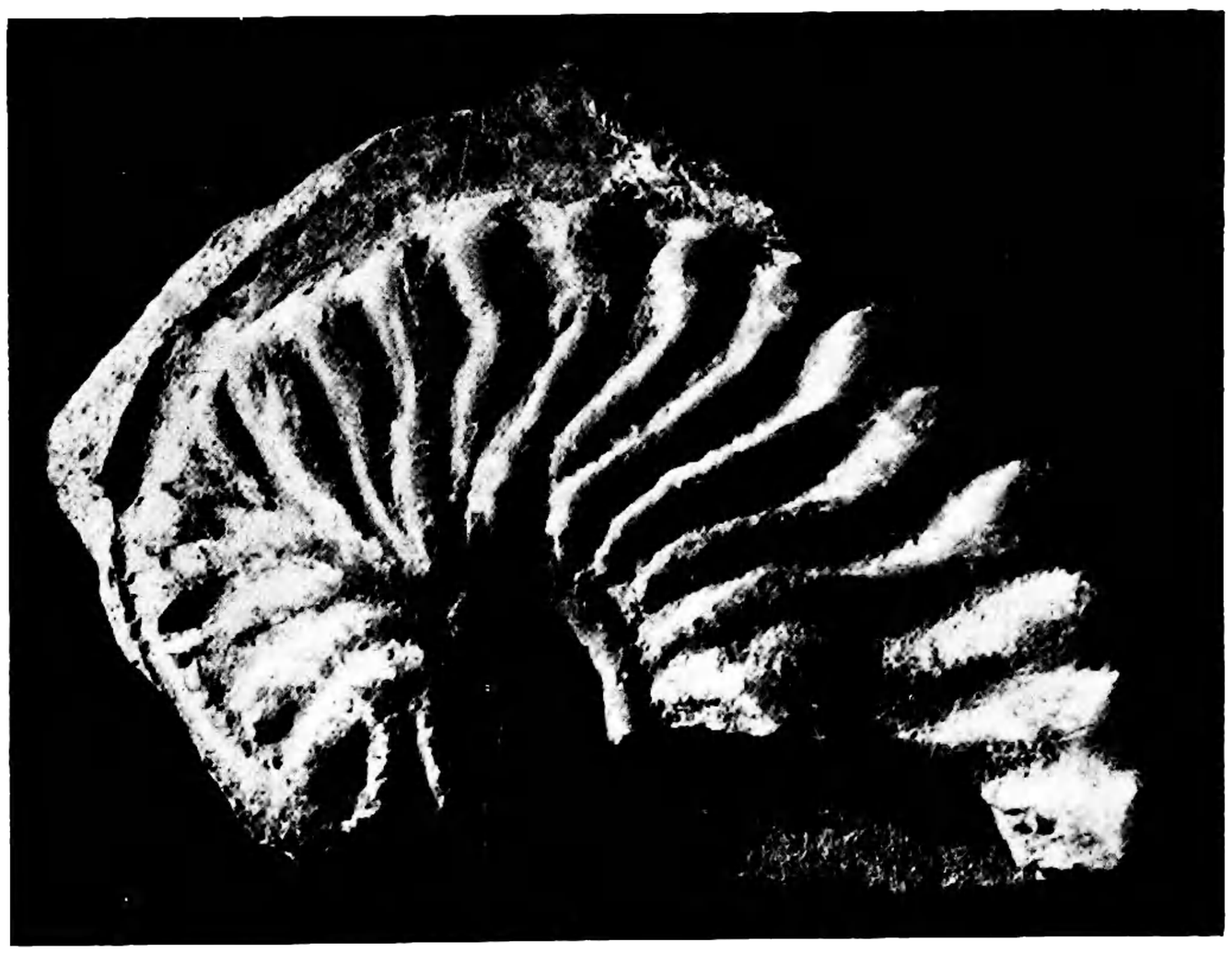


FIG. 97. ARGONAUT IN RELIEF, COVERED WITH CREAMY WASH; KOULOURA 2 ($\frac{2}{3}$).

Another very beautiful Argonaut relief on a larger scale, which also came to light among the contents of Kouloura 2, illustrates the part which this shell had already begun to play in the decorative designs belonging to the finest polychrome style of M. M. II.

This relief, which was on an almost flat surface, is depicted as reduced to three-quarters in Pl. XXIX. D. The shell is of a dull creamy white, the segments marked out in vermilion. It is moulded on a black glaze ground, the posterior projection or 'ear' of the shell being in this case for the most part preserved, and—as usual in Minoan representations of this subject—

somewhat exaggerated. Its anterior point is slightly broken away.[1] The ridges are less naturally rendered than in the case of the other relief.

The black ground is continued below, traversed by white bands and

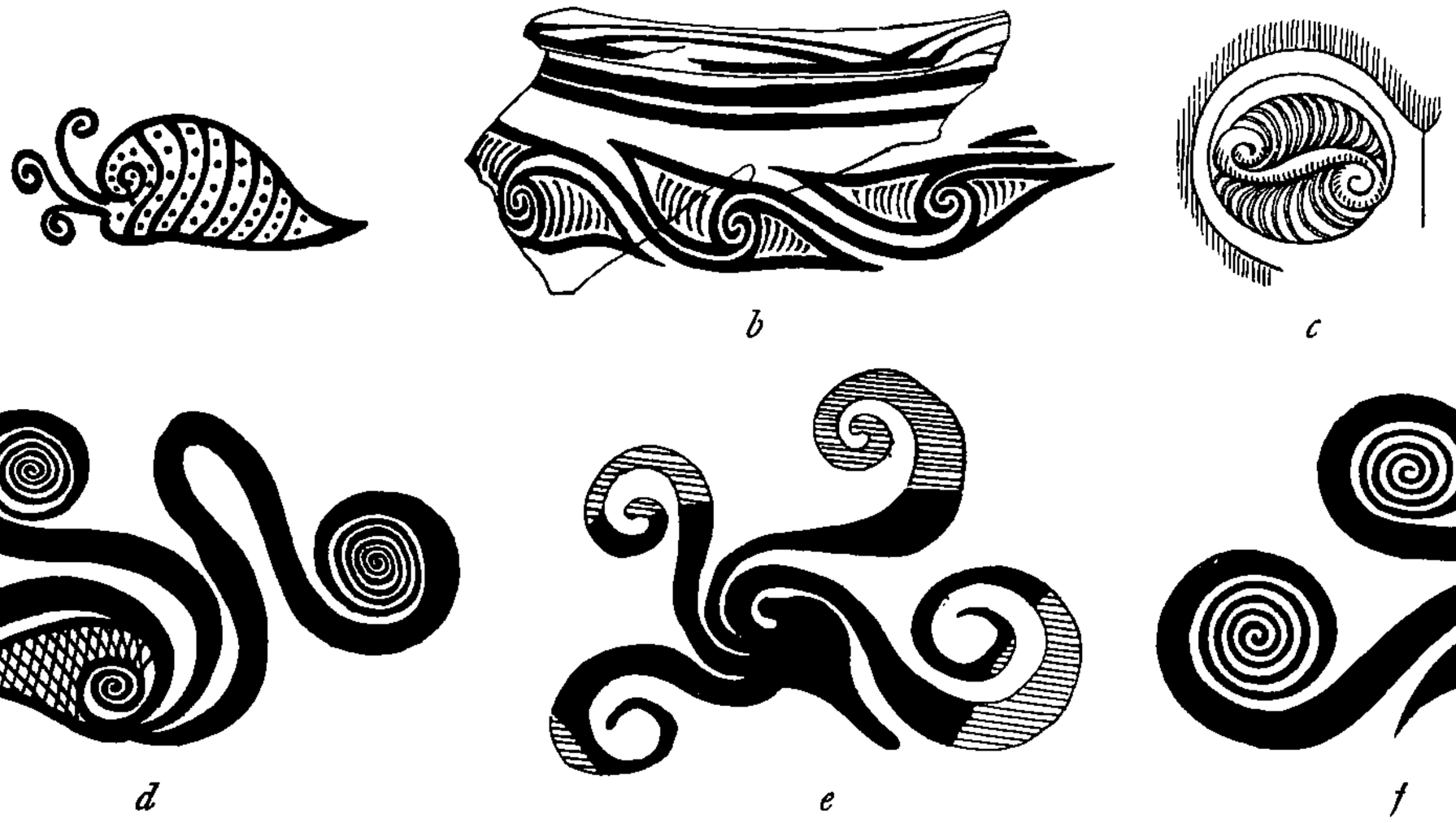


FIG. 98. ARGONAUT TYPES: *a*, ON L. M. I *a* VASE, GOURNIÀ; *b*, REDUPLICATED WHORL SHELL TYPE (FOR COMPARISON) FROM ASSIMILATED S-SCROLL AND TENDRIL PATTERN (*c*); *d*, *e*, *f*, L. M. III ARGONAUT TYPES WITH TRIPLE AND QUADRUPLE COILS REPRESENTING TENTACLES. Same Fig. II, 2, Fig. 314.

curves, which are crossed by the pointed extremity of what may have been a pendant motive of the same vermilion hue as the wavy lines of the segments. The black glaze, here combined with white and bright red, shows that this work belongs to the best period of M. M. II polychromy.

Earliest known examples of persistent Minoan type.

These two reliefs, it may be noted, supply the earliest examples of the Argonaut hitherto recognized in Minoan Art. From the closing Middle Minoan Period (M. M. III) onwards, the subject became more and more a favourite one with Minoan artists in all materials. From this time onwards, however, wherever its tentacles are rendered, its eight arms are usually reduced to three, arranged in ornamental coils. This conventional form is well shown in the reliefs on a steatite vase handle of transitional M. M. III *b*–L. M. I *a* style from the site of the Harbour Town of Knossos, and it is repeated in the versions of this object that form such a graceful feature among the marine groups of L. M. I *b* vases.[2] In the latest Minoan and

[1] Had it been complete the length of the base would have been as nearly as possible 12 centimetres. Its height is 6·5 cm.

[2] See *P. of M.*, ii, Pt. II, p. 509, Fig. 312 *a* ('Marseilles ewer'), *b* (Knossos). See, too, below, Pt. II, p. 278 seqq.

Mycenaean stage, this version of this female cephalopod and its shell gave rise to purely decorative forms in which triple, sometimes dual or quadruple, spirals are linked with what has been described as the 'half ivy-leaf' pattern.[1] As supplying an ornamental ingredient for the succeeding Age of decadence, it ranks with the octopus and the murex shell.

It was, indeed, wholly fitting that the Argonaut, the 'Nautilus' of the Ancients, should have played such a continuous part in the Art history of such a seafaring race as the Minoans. Delicate and beautiful in itself, it has always been regarded in the folk-lore of Mediterranean peoples as the prototype of all navigation—spreading a membrane between its two foremost arms and sailing across the open sea, while its remaining tentacles served as oars and rudder.[2]

Further Examples of M. M. II Polychrome Vases.

The contents of the new 'Koulouras' and of the deposit near the 'North-West Treasure House' have further enriched our knowledge of M. M. II polychromy by several interesting types. (See Pl. XXX; $\frac{2}{3}$ scale.)

M. M. II *a* polychrome tumbler.

Among these the tall 'tumbler', Pl. XXIX, A,[3] which was *c.* 16 centimetres in height—(*c.* $6\frac{1}{4}$ inches)[4]—represents, in an incurved and elegant outline, the further development of the smaller M. M. II *a* and *b* types illustrated above in Fig. 65.[5] In its general shape it closely resembles the Middle Empire type of ointment-pot, without its flat lip, and the intensive Minoan contact at this epoch makes it probable that this constantly recurring Egyptian form of vessel may have reacted on the Minoan. Ointment pots of this kind were found in the well-known tomb at Abydos, beside the imported polychrome M. M. II *b* pot, and together with cylinder seals of Senusert III and Amenemhat III[6] while, conversely, the alabastron lid with the name of the Hyksos Pharaoh Khyan was found in the Palace of Knossos itself. These Egyptian ointment pots, too, had been derived, like the Cretan, by successive stages from prototypes with upright sides.

[1] See *P. of M.*, ii, Pt. II, p. 511, Fig. 314.

[2] Pliny incorporates the popular notion of his day about the Argonaut's navigation in *H. N.*, ix, c. 47. According to his account the 'Nautilus' first rids itself of water by means of a tube. He compares it, when sailing, to a Liburnian vessel.

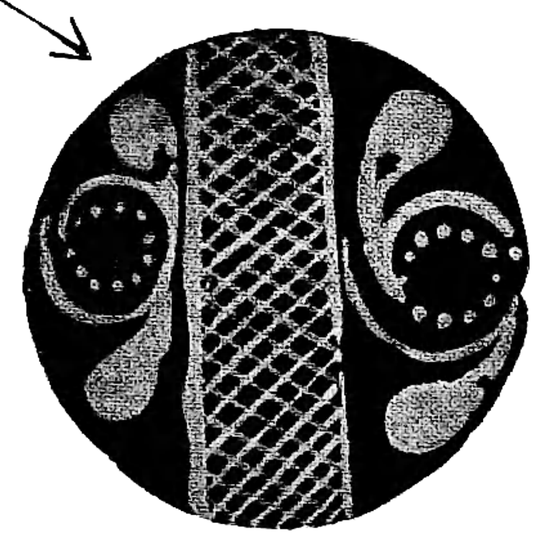
[3] Its upper margin is slightly restored. The remains of this vessel were found in the basement by the 'N.W. Treasury Building'.

[4] The diameter of its mouth is 12 cm. ($4\frac{3}{4}$ in.) and of its base 4·5 cm. ($1\frac{3}{4}$ in.).

[5] See above, p. 99.

[6] See *P. of M.*, i, Supp. Pl. IV to right, and cf. p. 268.

A 1



A 2

B

C

D

A–C. M. M. II POLYCHROME POTTERY AND (D) ARGONAUT RELIEF: KNOSSOS

Its white dotted decoration, moreover, coupled in its central section with a kind of 'herring-bone' ornament, coloured of a bright Indian red, distinctly shows the reflection of the earlier 'barbotine' technique. The 'herring-bone' pattern is, indeed, of specially common occurrence in the ridged decoration of that style. The hatched band on the base—white on the black ground—has a special chronological value, since an ornamental band with similar cross-hatching occurs on one of the painted sherds from Harageh,[1] in a deposit which has been ascertained to date round about 1900 B.C.[2]

FIG. 99. BRIDGE-SPOUTED POT (RESTORED) WITH THORN-LIKE DECORATION.

Bridge-spouted pot.

The bridge-spouted pot completed in Fig. 99[3] shows—like the preceding example—Indian red and creamy-white decoration on a black glaze ground. Otherwise the patterns within the 'medallions' of its circumference are quite unexampled. The two broad horizontal bands that traverse these are provided in each case with large thorn-like excrescences, both turning their points to the right, and presenting a curiously bizarre appearance.

Barbotine excrescences shown in profile.

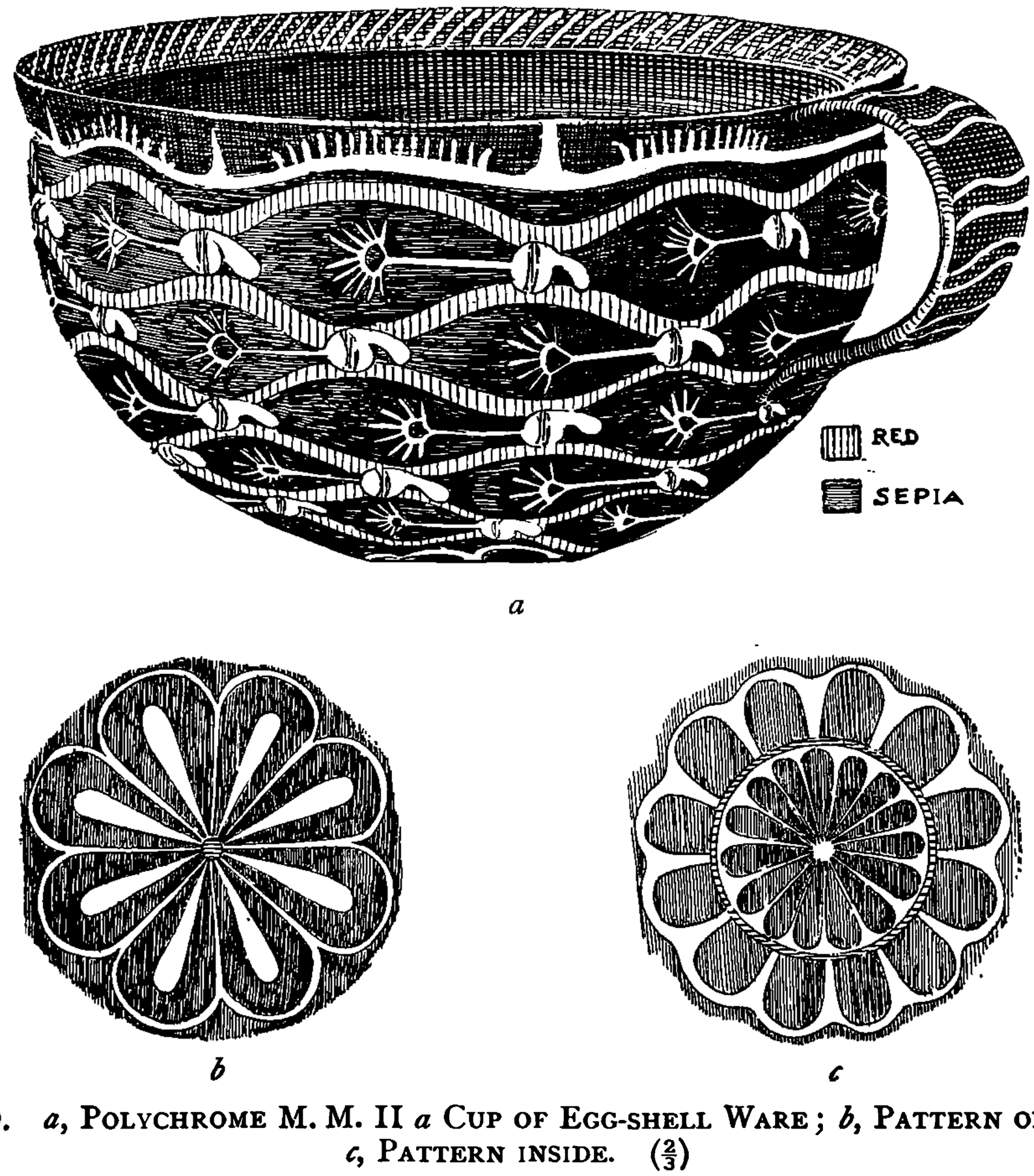
That their origin is to be traced to some antecedent feature in the history of ceramic ornament must nevertheless be inferred. Might not these excrescences really be due to a profile rendering of the thorn-like bosses often visible in the earliest 'barbotine' decoration, and which in themselves have been shown to derive from similar prickly protuberances on the outer shell of certain marine creatures like the 'thorny oyster' and the 'thorn-back crab'?

[1] *P. of M.*, ii, Pt. I, p. 212, Fig. 119, *h*.

[2] *Ibid.*, p. 211 seqq.: cf. R. Engelbach, *Harageh* (British School of Archaeology in Egypt, Twentieth Year, 1923).

[3] Found in the same basement as Pl. XXIX, Fig. B.

That the thorn-like excrescences depicted on the flat surface of this vessel above and below the creamy white bands, as shown in Fig. 99, were in fact suggested by such 'barbotine' examples, is corroborated by a pattern



a

b

c

FIG. 100. *a*, POLYCHROME M. M. II *a* CUP OF EGG-SHELL WARE; *b*, PATTERN ON BASE; *c*, PATTERN INSIDE. ($\frac{2}{3}$)

on a very beautiful M. M. II *a* 'egg-shell' cup found beneath the 'House of the Fallen Blocks'.[1] Thanks to the careful restoration of this cup in the Candia Museum,[2] it has been possible for Monsieur Gilliéron to execute the revised drawing, reproduced to two-thirds scale in Fig. 100, where certain details such as the bulbous protuberances beneath the feather-like sprays are now for the first time brought out. These certainly suggest the bulbs of some kind of flower, and it is interesting to note that a parallel to such a representation occurs on an early L. M. I *a*

[1] *P. of M.*, ii, Pt. I, pp. 218, 219, and the Coloured Plate IX, *a*.

[2] By the very skilful *formatore* of the Museum, Manolis Salustros.

sherd from Zakro. The spray that shoots from this in the present case might otherwise be compared with the eyed centre of a peacock's plume. It also suggests some of the 'palmette' columns of later Cypro-Minoan Art,

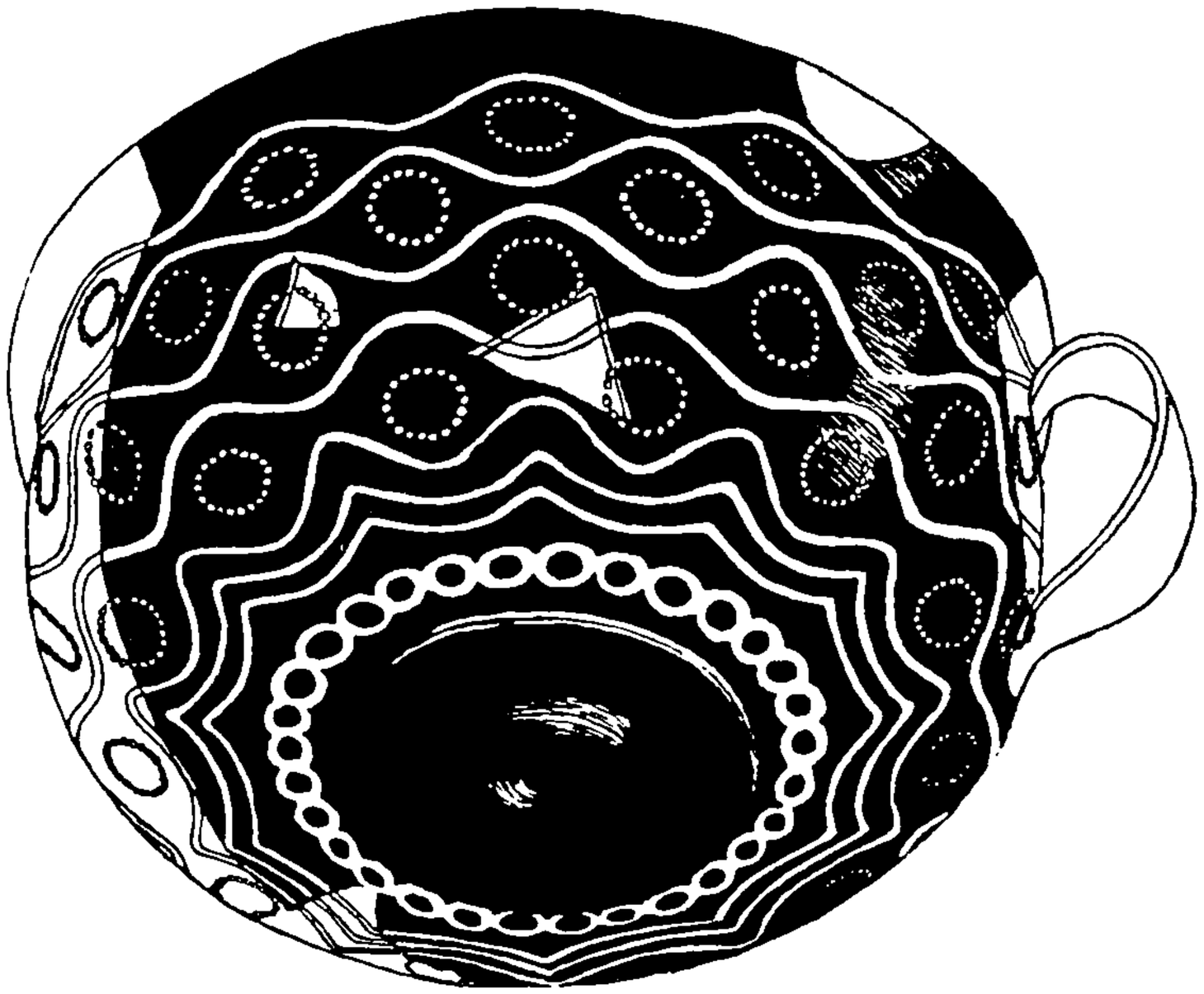


FIG. 101. EGG-SHELL WARE CUP FROM PALAIKASTRO OF SIMILAR FABRIC TO FIG. 100.

where elements are taken from the lily and lotus capitals of Egypt. On the whole it seems best to recognize here a conventionalized Iris flower.

Here the narrow creamy-white band round the upper border of the bowl presents, at intervals above, groups of small bristles or prickles between which again rise sharp thorn-like excrescences,[1] comparable to those of the bridge-spouted pot, Fig. 99.

The delicate rosette patterns beneath the base and at the bottom of the interior are given in Fig. 100, *b*, *c*.

The decoration of this cup, with its finely drawn pattern in creamy-white and bright red on the dark ground, may well be regarded as the most minutely executed of all known examples of Minoan ceramic Art in the days of its supreme development, though we have not here the delicate repoussé effect that enhances the larger water-lily design of another contemporary example.[2] In its fabric and decorative arrangement this vessel shows so much resemblance to the egg-shell cup, Fig. 101, from

[1] In that to the left of the centre of the cup the white paint has run and the point of the 'thorn' is thus blurred.

[2] *P. of M.*, i, p. 241, Fig. 181.

Palaikastro, that both may be safely regarded as the handwork of ceramic artists trained in the same palatial school.[1]

M. M. II *a* thorn-bossed

That prickly protuberances continued in vogue to the date of the finest development of M. M. II *a* polychromy is evidenced by a beautiful

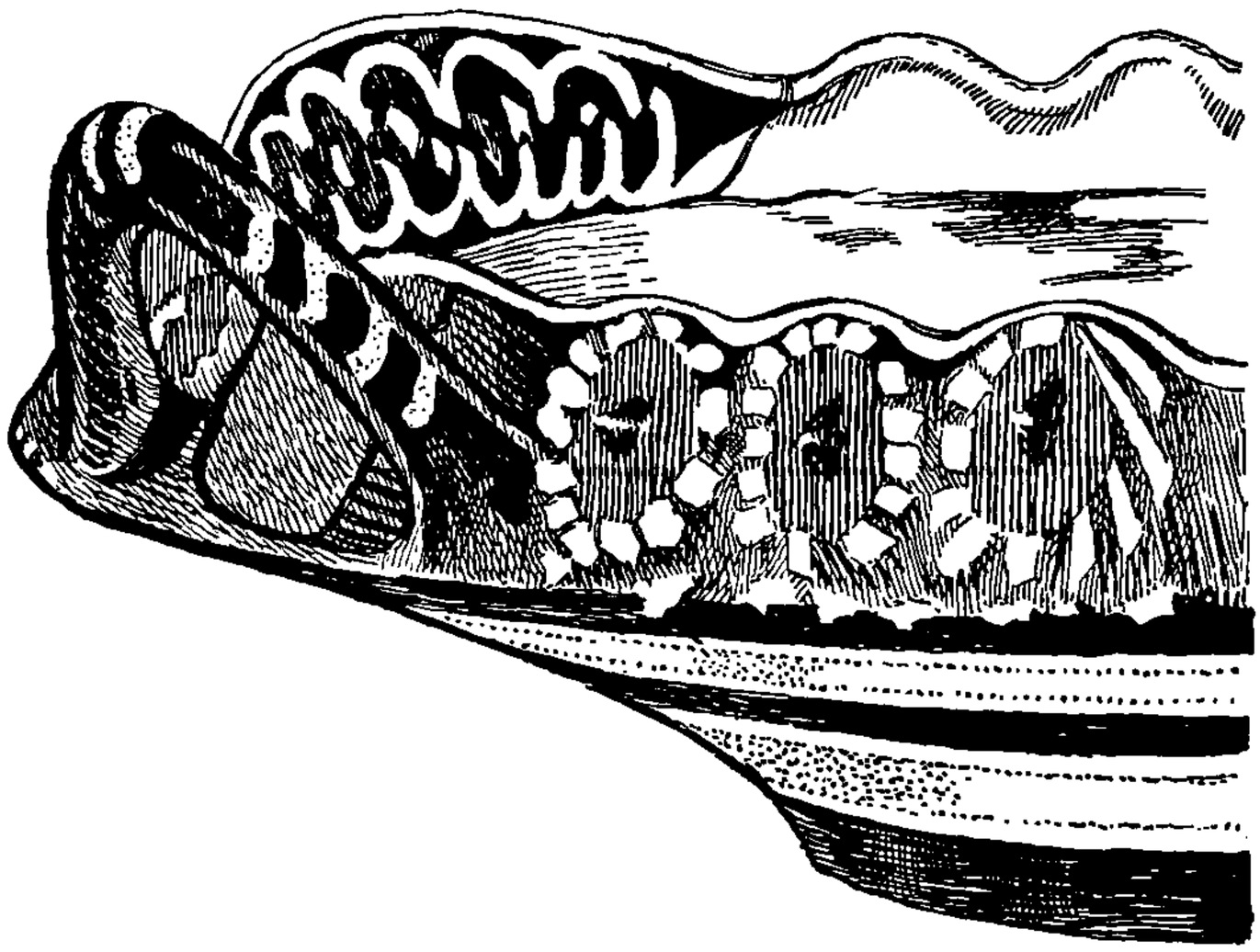


FIG. 102. LEFT SECTION OF POLYCHROME *TAZZA* WITH THORN-LIKE BOSSES (M. M. II *a*), KNOSSOS.

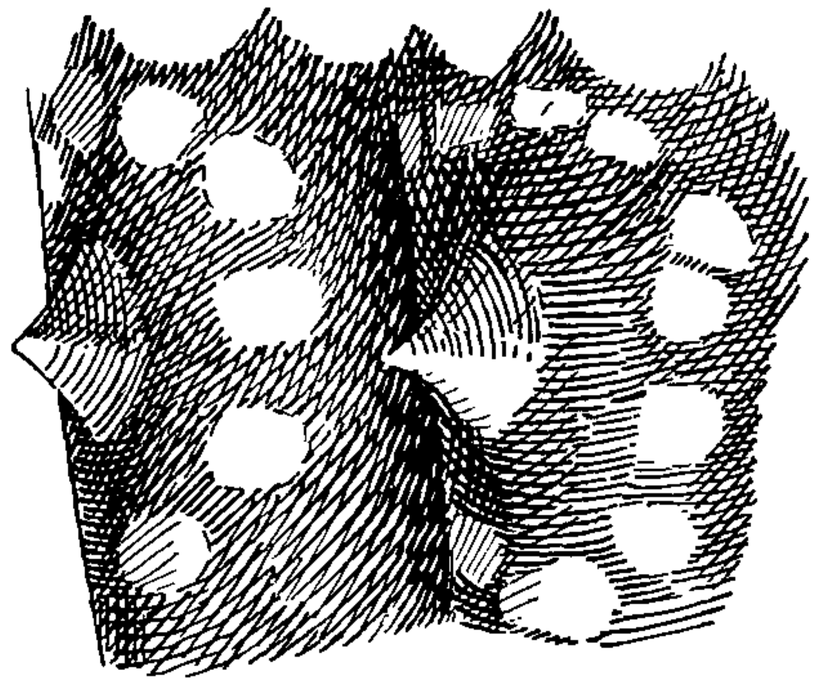


FIG. 103. THORN-LIKE BOSSES ON *TAZZA*.

bowls and M. M. I *b* prototype.

bowl or *tazza*—quatrefoil in outline with crinkled lips and two elegantly moulded handles—found in a M. M. II *a* deposit 3·20 metres down in the East Quarter of the Palace.[2] The bosses here round the margin, of a deep ruddy hue, suggested a comparison with the thorns of a rose-bush.

A section of the bowl showing three of these is given in Fig. 102, an enlarged rendering of others on part of a similar bowl is seen in relief in Fig. 103.

That these highly decorated bowls with their quatrefoil outlines and crinkled borders had their origin in an earlier class of barbotine vessels may be gathered from the suggestive points of resemblance presented by the similar bowl of M. M. I date, Fig. 104. The fact that there were in that case four handles does not affect the general indebtedness of the later type, which, indeed, records the curves of missing handles. We see the same crinkled

[1] Published by R. M. Dawkins in *B.S.A.*, *Suppl Papers*, *No. 1 on Palaikastro Excavations*, p. 16, Fig. 10.

[2] *P. of M.*, i, pp. 239, 240, and Suppl. Pl. III *a*; for a coloured illustration see A. E., *Knossos*, *Report*, 1903 (*B.S.A.*, ix), Pl. II, 2. Parts of other more or less duplicate specimens were found in the same area, one of which is in the Ashmolean Museum.

edges and barbotine ornament, though of smaller protuberances, all of the same size and evenly distributed. The vessel itself has a plain dark brown sur-

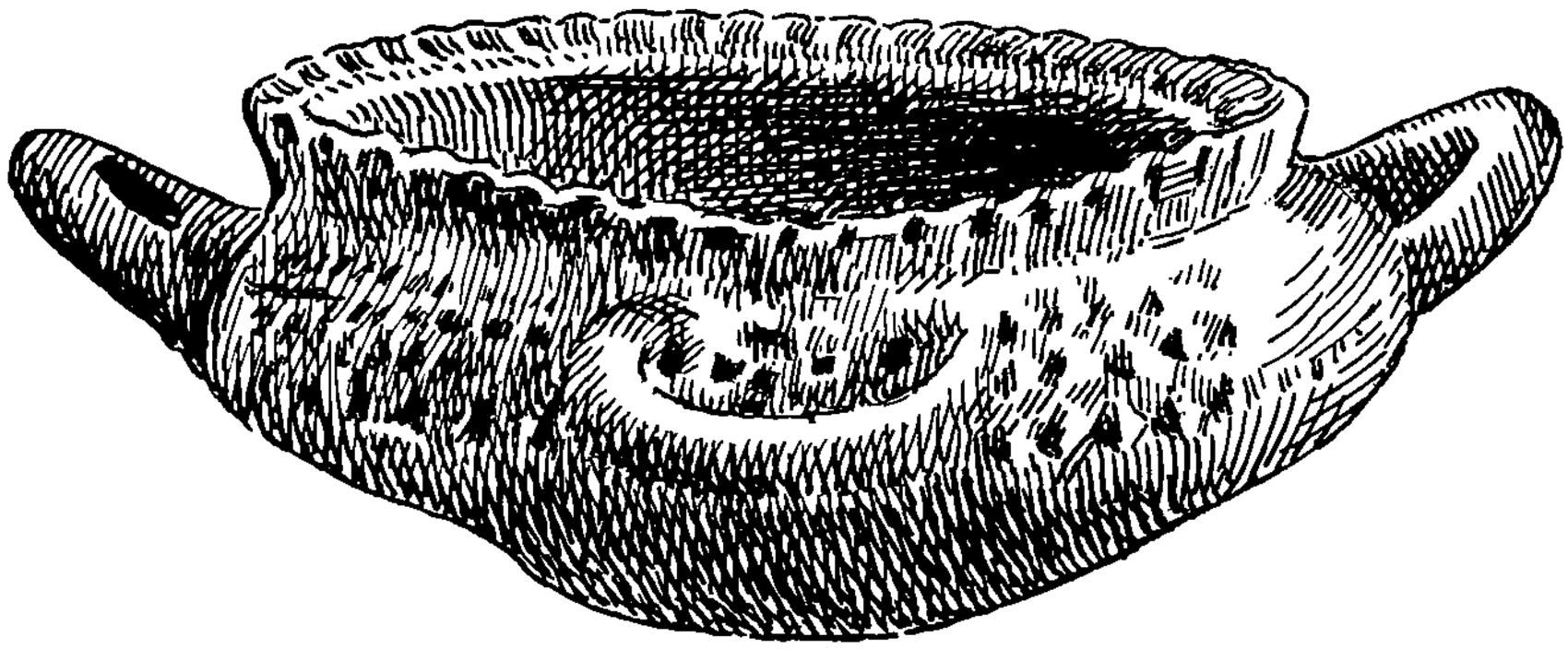


FIG. 104. M. M. I BOWL WITH CRINKLED MARGIN AND PRICKLE ORNAMENT: PROTOTYPE OF M. M. II *a* *TAZZAS*: KNOSSOS. (*c.* $\frac{1}{2}$)

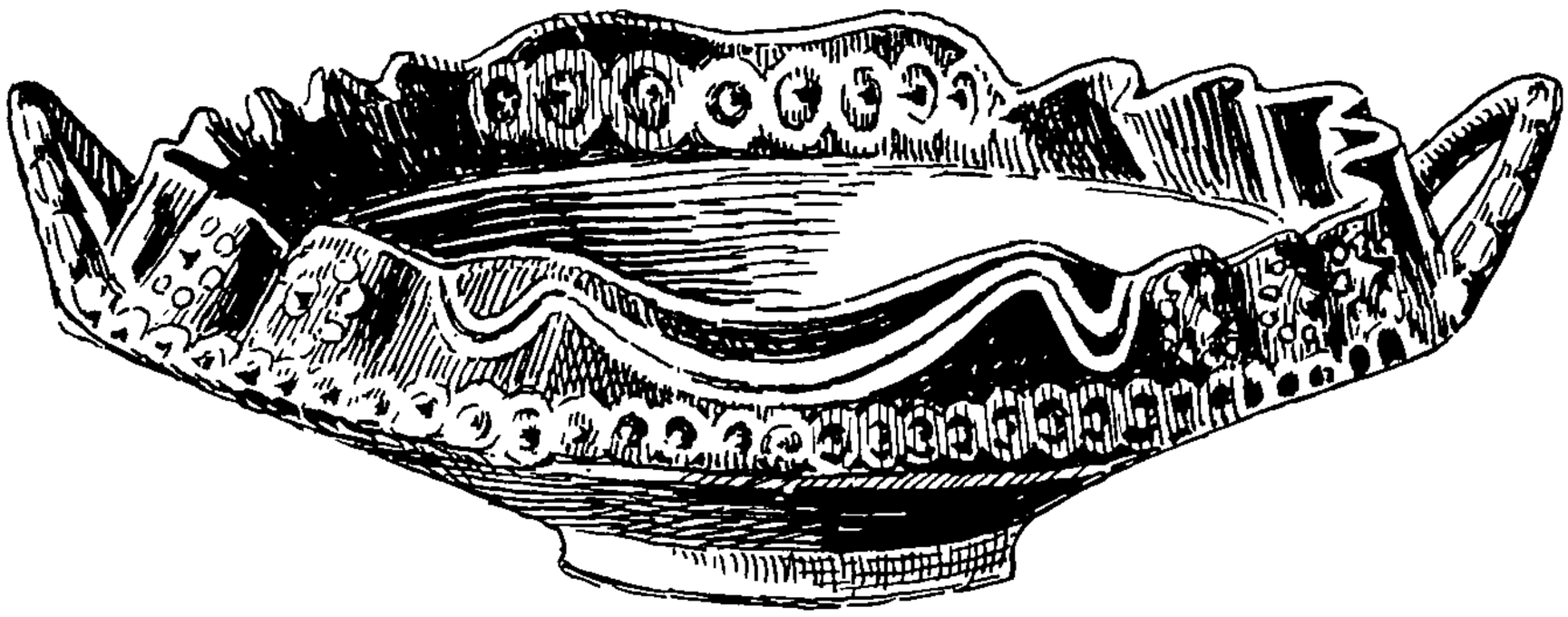


FIG. 105. QUATREFOIL M. M. II *a* *TAZZA* (RESTORED FROM FRAGMENTS IN THE ASHMOLEAN MUSEUM) WITH CRINKLED MARGIN AND THORN-LIKE BOSSES (COMPARE FIG. 102): M. M. II *a*, KNOSSOS. (*c.* $\frac{1}{2}$)

face. The improvement on the model supplies a good example of the fine taste of the M. M. II potter, and illustrates the selective way in which the prickles were varied, and reserved in compartments of their polychrome setting.

Bowl with scroll.

The bowl, Pl. XXX, B, is from the same deposit as the bridge-spouted pot, Fig. 107, below. Its interior design, the border of which is in part restored, belongs to a well-known ornamental group. In general character its scrolls recall a recurring pattern of Indian shawls.

The vase fragment Pl. XXX, C, also shows a creamy-white loop with a similar series of interior curves. This piece is interesting in relation to the 'creamy-white bordered' series described above, since it bears on the upper edge a projecting 'roll' like that on the 'beaks' of the ewers illustrated in Pl. XXIX.

Palmette decoration.

The palmettes on a large fragment (Fig. 106), also from a bridge-spouted pot—arranged there in a triple group—have decided points of affinity with the central design on the highly decorative pot of the same kind,

FIG. 106. DEVELOPMENT OF PALMETTE PATTERN ON BRIDGE-SPOUTED POT.

illustrated in colours in the First Volume of this book.[1] This in its turn has been compared with a scroll on the fine cornelian prism-seal that bears the cat badge of a Minoan prince whose titles may lurk in its hieroglyphic sign-groups.[2] In that case the motive certainly stands in relation to the old tree-symbol of Egypt, for which we have many analogies on Early Minoan seals. The present group of these palmettes, on the other hand, is curiously suggestive of Classical vase decoration.

Small polychrome parallels with the 'Abydos' vase.

The miniature bridge-spouted vessel (Fig. 107),[3] from the N.W. Treasury border, shows simple white designs on a black glaze, a not infrequent characteristic of M. M. II *b*. It repeats the 'racquet' pattern,

[1] *P. of M.*, i, Pl. III, p. 247.

[2] *Op. cit.*, p. 277, and Fig. 207 *a*. Cf. A. E., *Scripta Minoa*, i, p. 153, P. 23 and pp. 270, 271.

[3] The diameter of the body is only 11 centimetres.

though in a more imperfect context than that represented by the 'Harageh' class referred to above,[1] since it gives neither the ball nor the decorative excrescence that suggested it. The 'racquet' pattern thus

FIG. 107. SMALL BRIDGE-SPOUTED POT SHOWING 'RACQUET' PATTERN. HEIGHT 21 CM.

FIG. 108. M. M. II POT FROM ABYDOS TOMB FOR COMPARISON.

isolated remained in vogue, indeed, down to the earliest Late Minoan phase, when it recurs on a series of one-handled 'alabastra'.[2] On the other hand, the general character of the vessel and the four large rosettes set round its circumference betray so much conformity with the polychrome vase from the 'Abydos' tomb—placed with it on the same scale in Fig. 108—that it is impossible not to infer a certain approximation of date. As has been shown, the latest cylinders found in that tomb date from the reign of Amenemhat III—*c.* 1849–1801 B.C.[3]

It will be seen that the new materials brought out by the excavation of the 'Koulouras' 2 and 3 and the West Polychrome Deposit have afforded a valuable supplement to the existing materials, and throw a new light on the Palace fabrics at Knossos, representing the finest development of the polychrome style.

[1] See above, p. 131.

[2] Cf. *P. of M.*, ii, Pt. II, p. 512, Fig. 315, *a*, *b*.

[3] *Ibid.*, i, pp. 267, 268.

§ 94. A 'Snake Room' of Domestic Cult; 'Snake Tubes', their Origin and Survival.

Room in private house for Domestic Snake Cult; Utensils deposited in large jar; Miniature 'Milk Jugs' as in Temple Tomb; Bowls for offerings as in 'Spring Chamber'; Cylindrical vessels with cups attached—for snakes to drink from; Analogous ritual 'tubes' of sanctuaries at Gournià, &c.—with rustic figures of Snake Goddess; Theory that the 'tubes' were for chthonic libations invented ad hoc; *Real origin of 'snake tubes' from Minoan drain sections—two varieties of these adapted; Looped class of 'tubes' thus explained—cording of pipe sections; Simpler class, without loops, the earlier; Early type at Kumasa; Common Ring Snake a haunter of drains—still abounds on site of Knossos; Inference from origins—ritual 'snake tubes' not libation vessels; Tripod snake table—Lithuanian parallel; Snake cauldron (?) of seal-impression; Tripod hearth with ashes inside; Ritual transportation of ashes—Russian custom; Snakes as spirits of the household; Snake house guardian among Greeks; Household snake in Macedonian village—fed by British officers; Ritual vessel of honeycomb shape with feeding snake; Cretan snake attacks wild honeycomb for grubs; Other snake vessels from domestic shrine; Honey in food offerings to snakes—sacred snake of Erechtheion; Triple Cups of Diktaean Libation Table—? one for μελίκρητον; Snake table in Egypt; Knossian 'Snake Room' contrasted with primitive sanctuaries at Gournià, &c.; 'Snake Room' cult purely domestic—the Shrines show further religious evolution; Snake attributes in Palace Shrines, of terrifying nature; Chronology of 'Snake-tube' sanctuaries; Knossian 'snake room' relics assigned to L. M. II; Rustic clay idols of sanctuaries—cylindrical base derived from bell-shaped M. M. I* a *skirt; Survivals of old Snake cult in Sub-Minoan and Geometrical times; Rhodian 'Snake tube' of Geometrical date; 'Snake tube' assimilated to cult of Cyprian Goddess—becomes a dove-cot.*

Repository of Objects belonging to Domestic Snake Cult in Room of Private House at Knossos.

Room in Private House for domestic snake cult.

Amongst the numerous discoveries of 1930 nothing was more interesting than the contents of a repository in a small chamber of a private house a little South-West of the 'South-West Treasury House'. It opened on to a passage-way which was however only partially preserved.

By the entrance of the little room stood a large jar which, as not infrequently was the case with larger vessels, had survived a change in the

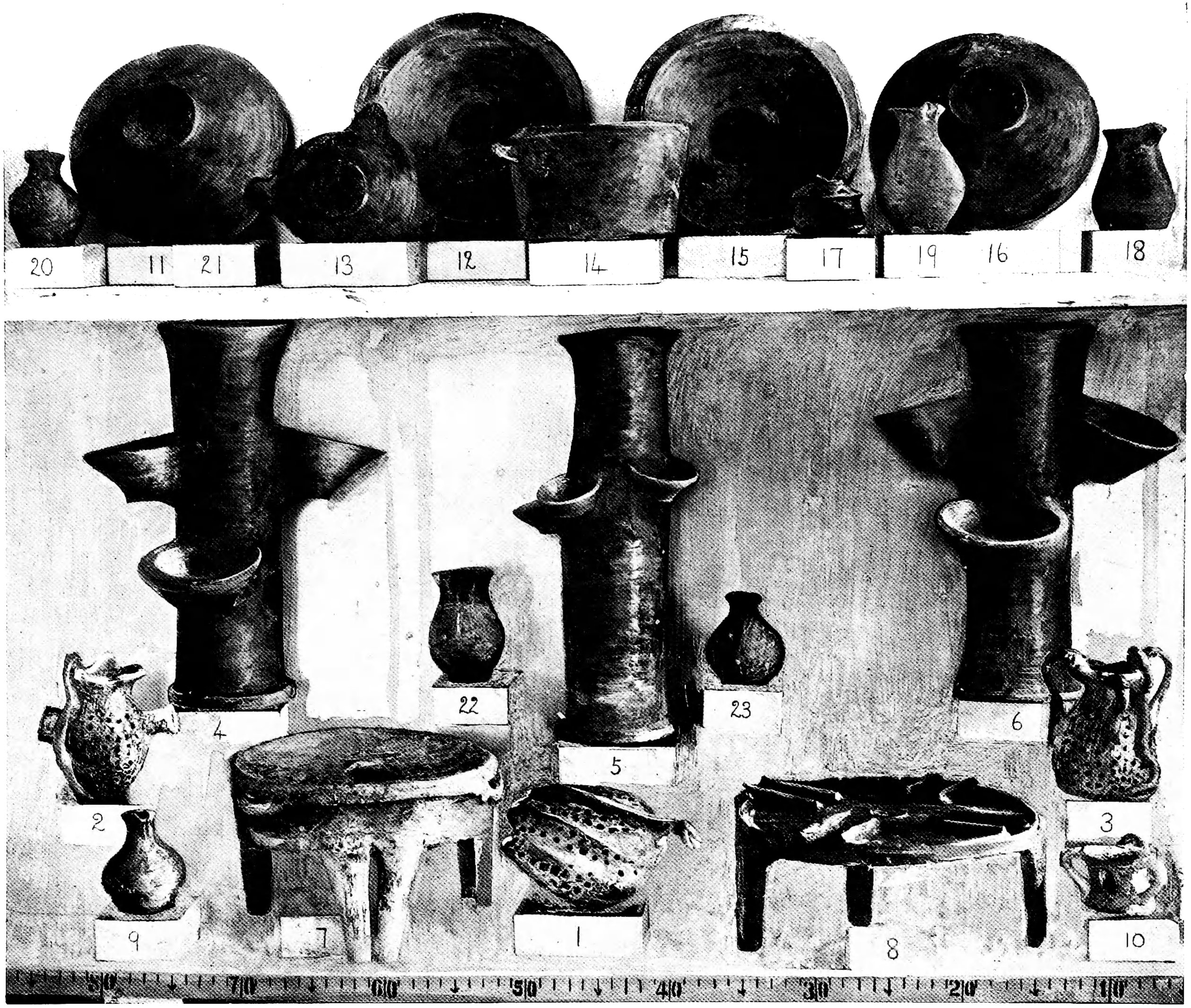


FIG. 109. OBJECTS CONNECTED WITH DOMESTIC SNAKE CULT STORED IN LARGE JAR (SUPPL. PL. XLV, A) ON FLOOR OF ROOM OF PRIVATE HOUSE, KNOSSOS.

Utensils deposited in large jar.

floor level. It rested on a pavement belonging to the very beginning of the New Era (M. M. III *b*–L. M. I *a*), but its lower part, up to about a fifth of a metre, had been covered by deposit forming the underlying support of a new floor that had been in existence at the close of the Palace period (L. M. II) and must have been laid down at some intermediate epoch.

The jar proved to have been the repository of what appears to have been a complete set of clay vessels and other utensils designed for the tending and cult of domestic snakes, and in some cases bearing plastic figures of the snakes themselves, coiling round the vessels and raising their heads above their rims. Both the jar itself and its contents had been much broken, probably by the falling in of the house itself, at the time of the catastrophic destruction that set a final term to the neighbouring Palace.

'Milk-jugs' as in Temple Tomb.

The jar (reproduced in Suppl. Pl. XLVI) was 71 centimetres in height and about 30 in the width of the rim. The objects that it contained—originally between thirty and forty in all—were of comparatively small size, the tubular vessels, which were the tallest, being about 30 centimetres in height. A class of plain pots, some handleless, some with rudimentary remains of handles, of which remains of about a score were found, averaged only about 8 centimetres or 3 inches in height (Fig. 109, 18, 19, 20, 22). They seem to have represented miniature milk-jugs used in this domestic snake cult and the recurrence of identical vessels in the Temple Tomb at Knossos has a deep religious significance.

Bowls for food offerings as in Spring Chamber.

Besides these little pots there were several shallow bowls, the largest 17 centimetres in diameter, of a form recalling those containing food offerings, of which such quantities were found in the later Spring Chamber sanctuary by the Caravanserai.[1] Here, again, we have an interesting evidence of the survival of the local cult, otherwise illustrated in the same 'Spring Chamber' shrine by the traditional figurine of the Goddess standing within the hut-urn, found in company with the bowls of offering.

'Snake Tubes' or Cylinders.

The 'Snake Tubes'.

The objects shown in Fig. 109, 4, 5, 6, recall, except for the cups attached to them and the fact that in this case they are closed at the bottom, a familiar article of ritual furniture of which specimens are known from a series of small domestic shrines that have come to light in Central and Eastern Crete (see Fig. 110). The essential feature of these utensils is a terra-cotta tube or cylinder, in these cases open both above and below. The tallest of them, as at Kumasa, attain a height of 80 centimetres, but the analogous

[1] See *P. of M.*, ii, Pt. I, p. 134, Fig. 68. Many olives were there found among the food-offerings.

FIG. 110. CULT OBJECTS FROM CRETAN DOMESTIC SHRINES: *a*, *b*, KUMASA; *c*, *d*, *g*–*u*, GOURNIÀ; *e*, *f*, PRINIÀ.

examples from the newly found 'Snake Room' are of barely half that size.[1] Nearly all these clay tubes show projecting ridges at their upper and lower extremities, otherwise they may be divided into two classes—those namely, from the early Shrine at Kumasa, which maintain more or less the same diameter throughout, and those which, as at Gournià and Prinià, display a distinct upward taper.

Cups attached to those of Repository.

The three specimens of these tubes found in the repository of the little house at Knossos, besides being closed below, differ from those illustrated in Fig. 110 in an important particular. As seen in Fig. 111, they are provided with two pairs of cups, symmetrically attached to their sides, which can only have been made to contain some kind of drink offering.

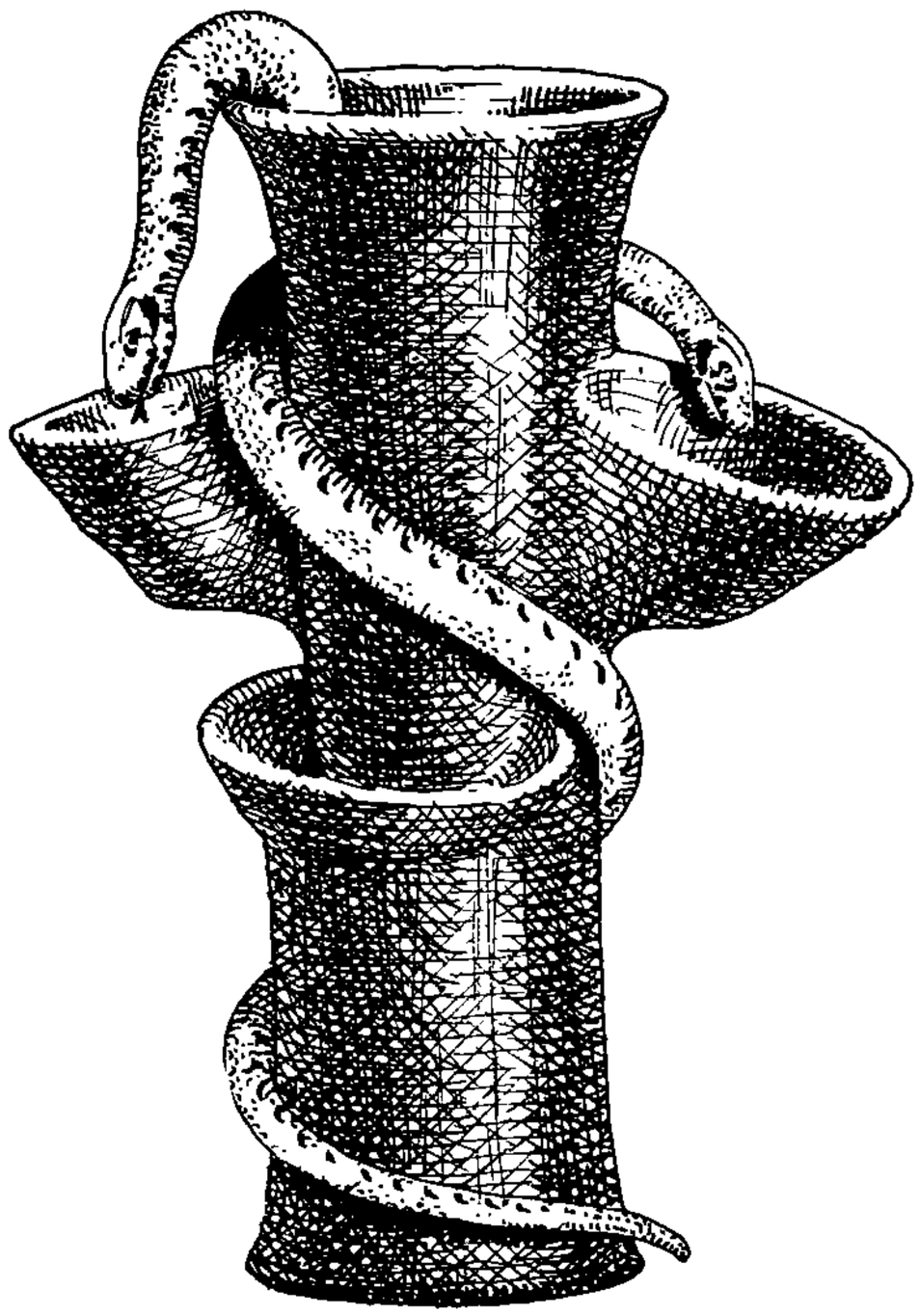


FIG. 111. 'CYLINDRICAL SNAKE VESSEL', KNOSSOS. (28 CM. HIGH.)

For snakes to drink from.

Nor can we be in doubt as to the object for which these little receptacles were designed. The snakes moulded in relief, as if ascending the sides of the similar clay tubes from Gournià and Prinià, sufficiently enlighten us. These cups were certainly not regarded as having been intended to receive libations for any higher divinity. Their object, as the plastic representations show, was simply and solely to provide offerings of drink to the Genius of the household in snake form. Their ideal destination is indeed illustrated by the sketch reproduced in Fig. 111, showing two actual Ring-snakes of the site in the act of drinking.

It is to be noted that, as in the case of the 'Snake table' described below,[2] accommodation was in each case provided for four reptiles at the same time. We can hardly doubt, moreover, that the interior of the tube itself was designed to supply them with a place of shelter and retirement.

[1] Their height is from 26·5 to 29 centimetres. A similar type from Kumasa is 60 cm., one from Prinià is 52 cm. The height of the complete examples from Gournià varies between 42 and 38 cm., thus closely approaching that of the Knossian examples. Another, however, from that site, of which only the lower part is preserved, seems to have been of somewhat larger dimensions.

[2] See p. 149, and Fig. 115 *a*, *b*.

Simple stage of cult.

It will be seen that the conclusions here arrived at, and according to which these objects are to be regarded as simple utensils made use of in feeding and tending the household snakes, is of great importance from the point of view of religious embryology. These vessels with the receptacles attached for the snakes to drink from, in this domestic 'Snake room', belong to a simpler stage of cult than the parallel series, fitted with the sacred emblems of the Minoan Goddess, found in the other shrines. It is to be observed, indeed, that, though the ritual furniture of our 'Snake room' had been very completely preserved, there was no trace of any anthropomorphic image.

Other ritual tubes of sanctuaries at Gournià, &c.

The series to which the other class belongs was brought to light in what we must regard as little household sanctuaries at Kumasa, Gournià,[1] and Prinià[2] in Crete. Our knowledge of the first of these little shrines is unfortunately very incomplete,[3] but in the two latter cases these 'snake tubes' were associated with rustic figures of the Snake Goddess herself and her sacral tokens (see Fig. 110, *c*, *d* and *j*, *k*, *m*, *n*). So, too, at Gournià part of a large jar was found, together with the other relics, presenting a Double Axe and disk in relief (Fig. 110, *u*). The disk superposed above this recurs above the Sacral horns on one of the clay tubes and must be regarded as a celestial sign. In the same way, it is natural to identify the rude figurines of birds, of which four were found in the deposit (cf. Fig. 110, *s*, *t*),[4] with the doves of the Minoan Goddess in her celestial aspect. Later on, as we shall see, by a further process of assimilation in honour of the Cyprian Goddess, the tube itself was transformed into a dove-cot.[5]

With rustic figures of Snake Goddess.

Three 'snake tubes' were found at Gournià round a tripod 'hearth altar' with remains of a stucco coating, and the base of a fourth tube—evidently displaced—lay above it.[6]

[1] For the Gournià shrine see Boyd-Hawes, *Gournià*, Pl. XI, and Miss B. E. Williams, pp. 47, 48.

[2] Sam. Wide, *Ath. Mitth.*, xxvi (1901), p. 247 seqq., and Pl. XII. The limbs and cylinder with snakes about them are figured there on pp. 248, 249. Supplementary material is supplied by Prof. L. Pernier, *Di una Città Ellenica scoperta a Creta* (*Bollettino di Arte*, 1908, p. 455 seqq, and Fig. w).

[3] Illustrations of some of the objects from the settlement of Kumasa are given by Xanthudides, *Vaulted Tombs of Mesarà* (trs. Droop). Pl. XVIII seqq. Dr. Xanthudides had proposed to write a more detailed account of this little sanctuary. *Dis aliter visum.*

[4] Miss B. E. Williams observes (*Gournià*, p. 47) that one of the little clay doves was possibly on the head of the Goddess. The image would thus have corresponded with the principal figure of the 'Shrine of the Double Axes' at Knossos—in that case, however, of Re-occupation date (L. M. III).

[5] See below, p. 166, and Fig. 128 *a*, *b*.

[6] This is shown in *Gournià*, Pl. XI, and described in the text as standing on the altar. According, however, to information

At Prinià, where rustic images of the Snake Goddess also occurred, plastic figures of the ascending reptiles appear on the 'snake tubes' (Fig. 110, *f*)[1] as in the former sanctuary. Elongated holes are in this case seen cut in the walls of the cylinder, possibly of a decorative nature. Later specimens, indeed, like those above mentioned—found in the Astartê sanctuary at Kition—show door-like openings, but the tube there belongs to a later stage of religious evolution.

Theory that the tubes were for chthonic libations—invented *ad hoc*.

What, then, was the origin of these clay-tubes? Explanations such as that which saw in them aniconic figures of the divinity or the actual tiará of the Goddess need not be seriously discussed. A theory put forward by Dr. Zahn,[2] and accepted by Professor Martin Nilsson,[3] would interpret them as libation vessels connected with the chthonic cult. An analogy, it was thought, might be found with the circular built altar over the Fourth Shaft Grave at Mycenae[4] and the similar sacrificial pit at Tiryns,[5] both without any bottom, so that the drink offerings could percolate freely to the shades of the departed below.[6]

It may well be objected, however, that this idea of an article of ritual furniture, deliberately invented in conformity with a religious idea, violates what may be regarded as an universal principle in the evolution of such

supplied to me by Mr. R. B. Seager, one of the excavators of Gournià, it was not actually standing on it. Indeed, the force that broke away its upper part could hardly have left it in its original position. This rectification is important, as arguments have been drawn from its supposed position as resting on the tripod altar-hearth.

[1] Pernier, *Boll. di Arte*, 1908, p. 43, and Fig. 11.

[2] In Kinch, *Fouilles de Vroulia* (Berlin, 1904) *Kultgerät aus Rhodos*, p. 34.

[3] *The Minoan-Mycenaean Religion and its Survival in Greek Religion*, pp. 272, 273.

[4] Schliemann, *Mycenae*, Plan F and p. 213. Cf. G. Karo, *Die Schachtgräber von Mykenai*, i, p. 10, and Fig. 1, p. 11.

[5] Doerpfeld in Schliemann, *Tiryns*, p. 339, Figs. 137, 138.

[6] A later parallel has been sought in a cylindrical vessel of sixth-century Attic fabric —its height slightly over twice its diameter— open above and below which Furtwängler (*Archiv für Religionswissenschaft*, 1905, p. 192) calls an *eschara* (ἐσχάρα) and regards as 'a round open fire-hole' to be placed on the hearth, and Röhde (*Psyche*, ed. 4, p. 35), as 'eine Art Röhre, direkt auf der Erde aufstehend (cf., too, Zahn and Nilsson, *loc. cit.*). Its funereal connexion is indeed attested by the late black-figure designs that surround it of Charon in his ferry-boat, with little souls or *eidola* fluttering about. Neither of these two alternative suggestions seems, however, to be very probable, and there does not appear to be sufficient reason why this collar-shaped object should not have been the stand of some round-bottomed vessel. After examining, with Mr. E. J. Forsdyke's kind assistance, the series of Geometric vessels of this cylindrical open shape in the British Museum I can confidently state that the majority of them were probably stands of this kind, and that there was not one that might not have been used for this purpose.

objects. That a type of tube-like vessels should have arisen from the analogy of a class of built, well-like openings in the earth, is wholly inadmissible. The origin of ceramic articles of the ritual class is rather to be found in the adoption and further adaptation of objects like cups, bowls, and ewers, and stands for such in common use. When, for instance, as in certain vase designs, we see the upper rim of a great jar, the rest of which is buried in the sepulchral mound, and, it may be, little souls flying out of it,[1] we have generally to recognize a vessel of ordinary type, used for funeral libations and with, at most, an opening made in its base.

There was, in fact, a very material model at hand.

'Snake Tubes' derived from Minoan Water-pipe or Drain Sections.

Real origin from drain sections.

A satisfactory explanation, which covers all features and both classes of the 'snake tubes' with which we are dealing, may indeed be obtained by a comparison with separate sections of one of the beautifully compacted clay water-pipes, as seen in the early Palace at Knossos.

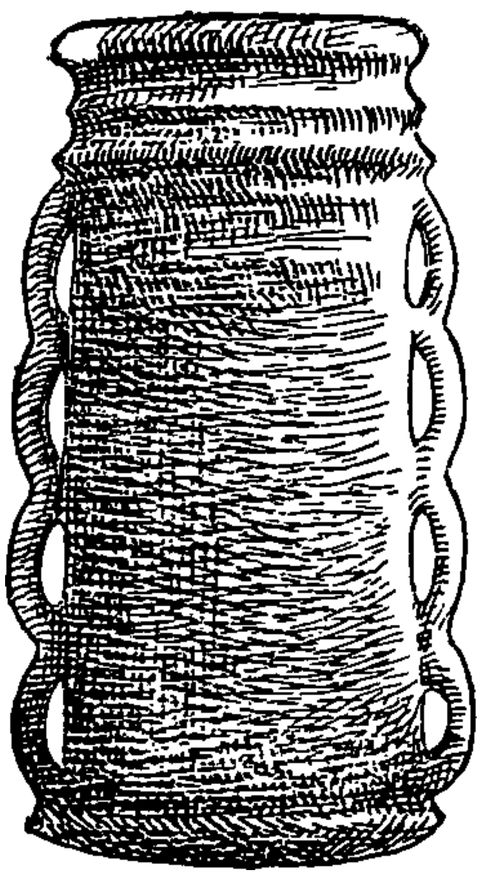


FIG. 111 *b*.

Both Minoan varieties of these adapted as 'snake tubes'.

These, as has been well demonstrated by those found *in situ* on the Palace site, are of two main varieties, plain tubes, namely, as seen under the 'Draught-board Area', and those provided with two loops on each side, such as were found beneath the South Porch, Figs. 112–114.[2] The slightly tapering outline and the stop-ridges near the smaller end are common to both. The comparative examples given in Fig. 110 of 'snake tubes' from the primitive Cretan house shrines show that in this case too we have to deal with two main groups, those with a plain circumference and those with three or four loops running up their sides (Fig. 111 *b*).

Looped class of tubes thus explained: cording together of pipe sections.

From the comparative point of view this latter class is of special importance, for the side loops—hitherto unexplained—stand in the most natural relation to the pipe or drain sections presenting on either side pairs of similar attachments (see Figs. 112–114). These themselves perform a definite constructional function, enabling the separate sections to be corded together for better cohesion in places where, as in the case of the South Porch, they passed over made earth, entailing the danger of sagging

[1] E. g., in the scene of the swinging Nymph, already cited (Berlin *hydria*. Furtwängler, No. 2294).

[2] *P. of M.*, i, p. 143, Fig. 104 A (cf. *B.S.A.*, p. 13, Fig. 7).

and eventual dislocation. The relation of this looped type to a length of piping beneath the South Porch is illustrated by Mr. Christian Doll's careful drawing reproduced in Fig. 114. The ropes are here sketched in.

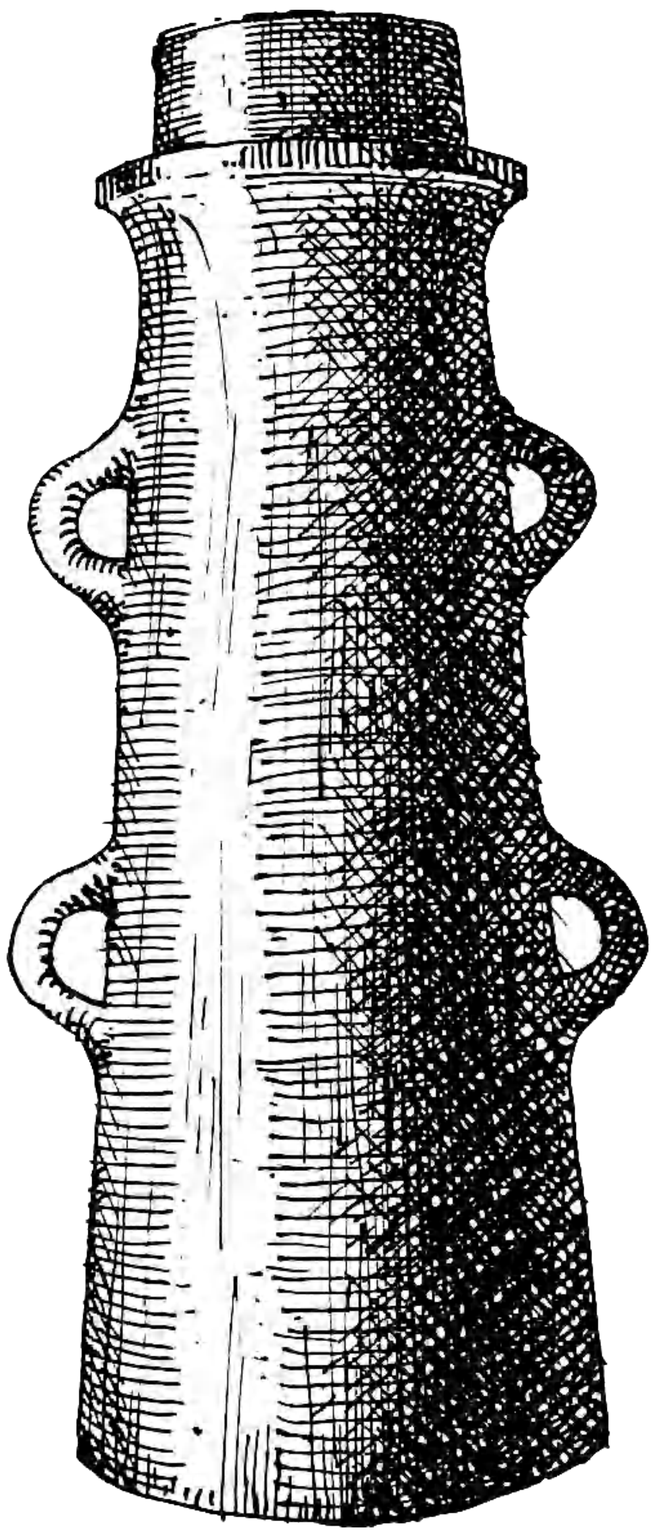


FIG. 112. SECTION OF TERRA-COTTA WATER-PIPE FROM UNDER SOUTH PORCH, KNOSSOS.

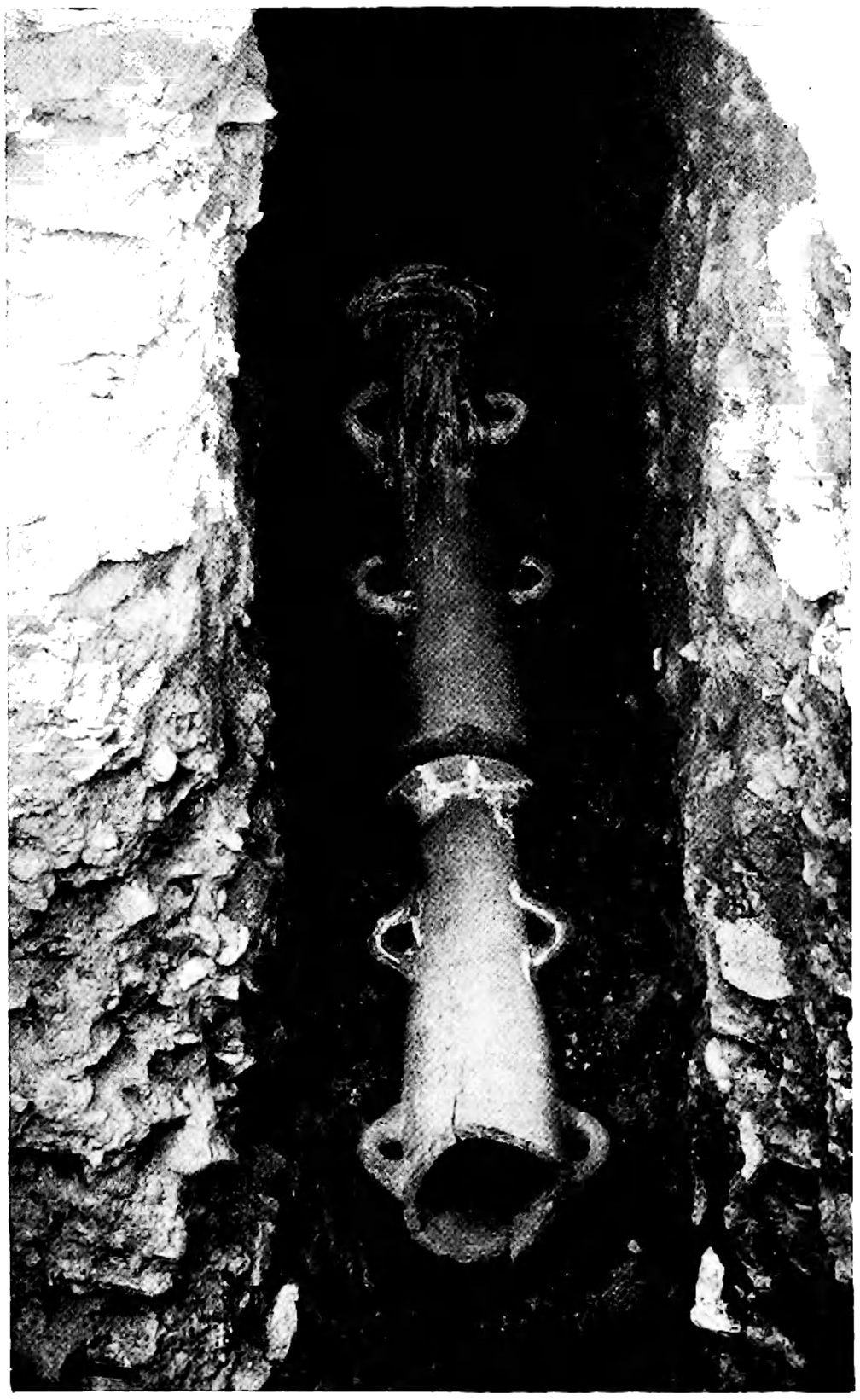


FIG. 113. WATER-PIPES BELOW SOUTH PORCH, KNOSSOS (M. M. I *a* IN POSITION).

The increase in the numbers of the loops in the derivative type, where they had ceased to serve any purposes of utility, is in itself one of most usual processes of ornamental development. At the same time the survival of the loops has preserved an interesting record of the antecedent history of the tubes themselves.

That the looped excrescences on these objects as used for ritual purposes were not, in any case, intended for handles is proved by the circumstance that real handles of the horizontal kind were in some cases added on the intervening part of the circumference (see Fig. 110, *c*, *d*). On the other hand, Sam Wide's suggestion that the handle-like loops—of which there are

regularly four on these tubes—represent 'stylized' figures of the snakes themselves[1] is sufficiently answered by the actual appearance in many cases of the reptiles side by side with them.[2]

In the case of water-pipes like those described, laid down on solid

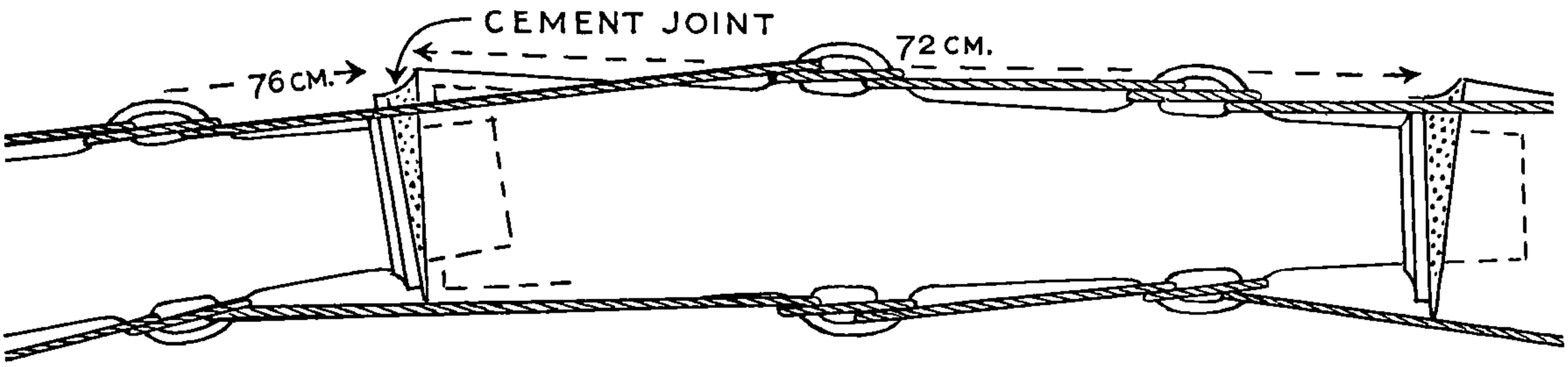


FIG. 114. LOOPED SECTIONS OF WATER-PIPES BENEATH SOUTH PORCH (M. M. I *a*) WITH ORIGINAL CORDING INDICATED.

ground, there was naturally no need for the additional roping together of the individual sections. Those, for instance, brought to light beneath the 'Draught-board Area' in the East Quarter of the Palace, which are laid down on a compact Neolithic stratum, have no handles for such supplementary attachment. This variation in the prototypes, it will be seen, accounts for a similar difference in the formation of 'snake tubes' themselves, one variety of which does not show the looped excrescences. The larger specimen from Kumasa (Fig. 110, *a*), like those from the East Quarter, are of this simpler type. In this case, too, we see an upright cylindrical form without any taper, which we may reasonably suppose to be taken from the most primitive type of water-pipe.[3]

Simpler class, without loops, the earlier.

It is further to be noted, as a sign of early tradition, that the larger 'snake tube' of the domestic shrine at Kumasa, which, as the associated pottery shows, is of M. M. II date, very closely corresponds in its height—80 centimetres—with the average length of the water-pipe sections of the Palace, which is from 75 to 75·5 centimetres. As a rule, however, the 'snake tubes' are of distinctly smaller dimensions.[4]

Early type at Kumasa.

The points of correspondence between the sections of the fine clay

[1] *Ath. Mitth.*, xxvi (1901), p. 248. The view was criticized by Zahn (*Vroulia*, p. 31) on the same grounds as are here given.

[2] The general resemblance of the clay tubes, as seen in the primitive sanctuaries, had independently struck Professor Martin Nilsson in his careful study of these (*Minoan Mycenaean Religion*, p. 271): 'So far they show a certain resemblance to the water-pipes of the drains.' He did not there, however, carry his observation to its logical conclusion.

[3] Smaller specimens of clay-pipe sections of this straight type were found by the chamber North of the 'Propylon' of the Northern Entrance.

[4] See above, p. 142, note 1.

pipes that secured the water-supply of the Early Palace at Knossos with the 'snake tubes' of the household cult are, as shown above, so varied and detailed in their character that it is difficult not to accept the conclusion to which this evidence points. The selection, moreover, of such an object—no doubt in the first instance the actual section of a water-pipe—as temporary shelter for the domestic reptiles is itself easy to explain. Not only, where such pipes served as open vents or drains, was it easy for snakes to take shelter in them, but the particular species that is still abundant on the site, the Ring-snake—*Tropidonotus natrix*—is, as its name implies, largely aquatic in its habits, and, as a matter of fact, is often found in water-conduits and land-drains.

Common ring-snake a haunter of drains.

The Ring-snake is not only of frequent occurrence on the hill of Kephala itself, but in summer time it haunts the banks of the Kairatos stream below and swims about in its pools. It should be borne in mind, however, that, like others of its family, it shows an equal predilection for warmth. It not only basks in the sun, but is known to have a liking for the neighbourhood of the domestic hearth. In the case of the former, as has been pointed out, such external heat promotes the process of gestation, as it does the incubation of the eggs. Nor has this species lost its attachment for the Palace site itself. In the month of March—a little before the discovery of the 'Snake-Room' repository—a chink in the cracked corner of a gypsum block near the 'North-East Hall' disclosed a Ring-snake hibernating.

Still common on site of Knossos.

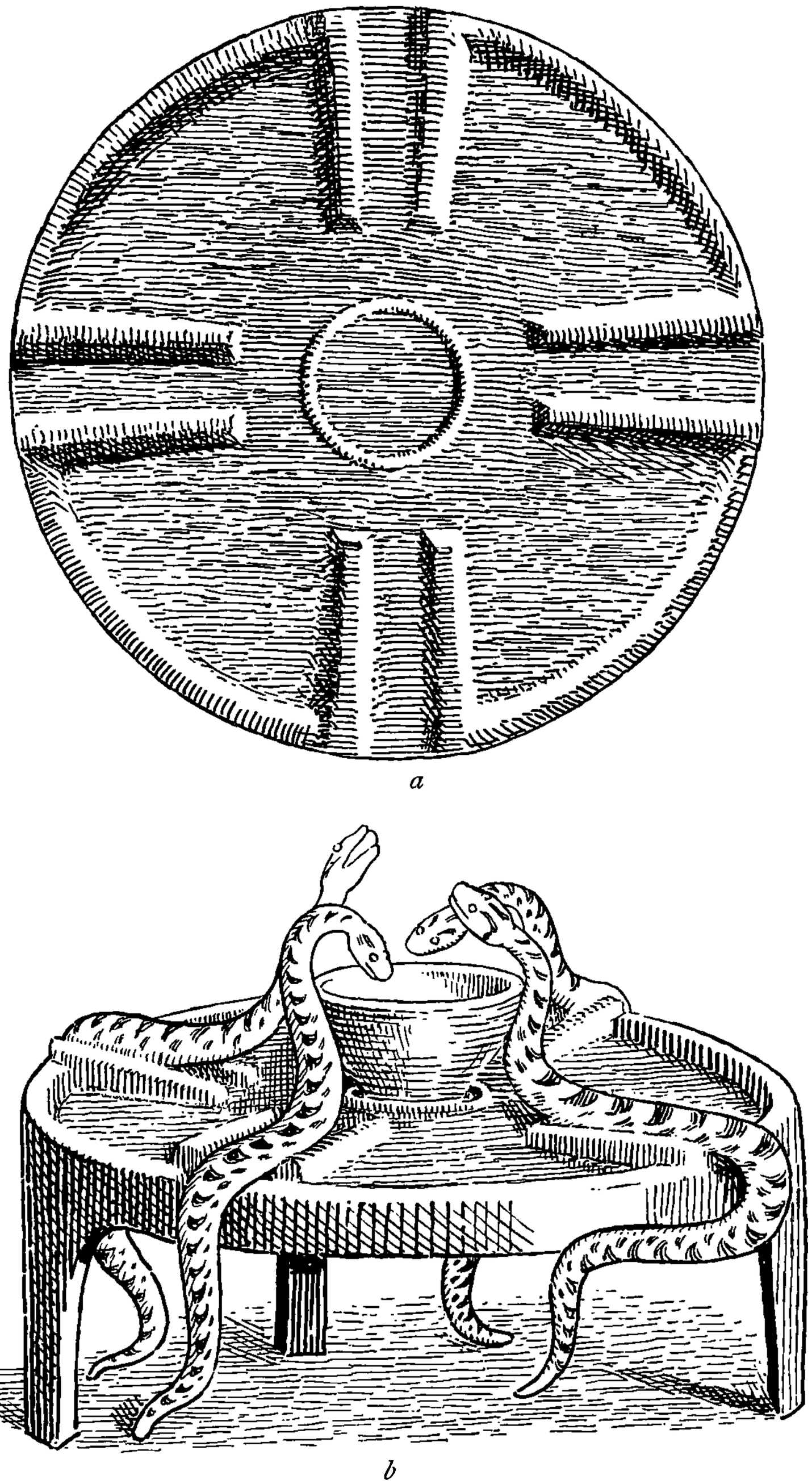
It is a snake of this species that is depicted in the ideal sketch (Fig. 111, p. 142) of the reptile climbing the tube to drink from one of the receptacles.

From what has been said above, it will be seen that, so far from the tubular cult objects of the primitive Minoan sanctuaries having been a deliberate religious invention, they were simply adaptations of familiar forms of drain- or water-pipe sections connected in the most natural way with the prevalent local species of reptile. As forming part of the purely household cult at Knossos, this form of utensil was adopted with a view to the snakes' own convenience as a place of shelter, and was further provided with cups outside to supply them with milk or some other liquid nourishment. The provision here for two pairs, or a group of four, itself shows a recognition of their gregarious habits.

Inferences from origins: ritual 'snake tubes' not primarily libation vessels.

Whether or not in the primitive sanctuaries, where tubes of this kind are associated with the cult of the Minoan Goddess, they were used for libation may be a moot point. What is certain is—as is clear from the snakes moulded on their walls—that these ritual tubes still bore a special

relation to snake-worship in its more generalized chthonic character. Later, as we shall see, in deference to the Goddess in her celestial aspect, the snake tube was metamorphosed into a dove-cot, which certainly does not seem to be any more appropriate as a vessel for libations.



a

b

FIG. 115, *a*, *b*. TRIPOD SNAKE TABLE. *a*, SEEN FROM ABOVE; *b*, WITH CENTRAL CUP RESTORED AND RING-SNAKES FEEDING. (DIAM. 25 CM.)

Tripod 'Snake Table'.

Tripod 'snake table'.

The hospitable idea of entertaining a *parti carré* makes itself evident in another article of the 'Snake-Room' furniture, which is of quite unique appearance.

It consists of a small terra-cotta tripod stand, or table (Fig. 109, 8 and Fig. 115, *a*, *b*), the upper surface of which is divided into four separate compartments by raised partitions. Between each of these compartments is a groove or open passage

between the partitions, leading to a central space with a small raised circle in the middle. This raised circle is analogous on a smaller scale to those which, as in the Royal Magazines, surrounded the bases of large jars. Here it evidently marks the position of the base of a central bowl to contain the food set out, as shown in Fig. 115, *b*.

Lithuanian parallel.

The stand, in fact, was a small 'snake table,' conveniently arranged with grooves to accommodate two pairs of reptiles with their heads and necks rising towards the food vessel in the middle as pictured in Fig. 115, *b*. We have here the counterpart to the four cups attached to the 'Snake tubes'. On an early cult object from Cyprus two snakes feed from a double table.[1]

The practice of preparing a table with food set on it for the household snakes is, indeed, paralleled by a usage recorded of the Lithuanians—who included ethnically the Old Prussian stock.[2] As late as the sixteenth century of our era these people tended snakes, whom they regarded as domestic deities, by the stove-corner, where stood the small table used for their own meals. At certain seasons of the year the snakes were summoned by prayer and ritual to come to the table and partake of a feast provided by their votaries. These, we are told, came forth from their hiding places and, climbing up over the clean cloth with which the table was spread, took their places upon it,[3] returning to their holes after devouring the repast.[4]

Snake Cauldron.

Snake cauldron (?) of seal-impression.

The reptiles, as seen in some of these small vessels (Fig. 119 *a*, *b*), with the head raised above the rim, suggest a subject on a somewhat rough seal-impression of more or less contemporary L. M. II date found in the Little Palace at Knossos and reproduced here in Fig. 116, enlarged to 3 diameters, from a drawing of Monsieur E. Gilliéron, fils. We

[1] For an early Cypriote double stand with two ascending snakes cf. p. 166, n. 2, and see p. 177, Fig. 140.

[2] *De Religione et Sacrificiis veterum Borussorum: Epistola Io. Melitii ad Georgium Sabinum*. A translation of this rare publication by Mr. F. Conybeare, from a copy in my library, is to be found in *Folklore*, vol. xii, 1901. The original work is grouped with other tracts in a miscellany entitled *De Russorum Moscovitarum et Tartarorum Religione*, &c., Speyer, 1582, see p. 260. For a similar practice among the Livonians see J. Lasicius, Polonus, *De Diis Samogitarum* (in *Respublica Polonia*, &c., 1627, Elzevir ed., p. 309).

[3] 'Hi vero exeuntes per mundum linteolum conscendunt et super mensam assident'.

[4] If the snakes did not come out of their holes or failed to consume the food provided, it was regarded as a bad augury—and some misfortune would befall the household that season. This recalls the terror of the Athenians when it was rumoured that the sacred snake that guarded the Acropolis had left his honey cake untouched—a rumour that made it easier to persuade them to evacuate the city (Herodotus viii. 4).

see here a boat-shaped object—apparently some kind of cauldron or large bowl—from near the edge of which on either side rise two coiling objects that have the appearance of a pair of snakes.[1] Above appears a horizontal bar from which, it seems, another serpent descends.

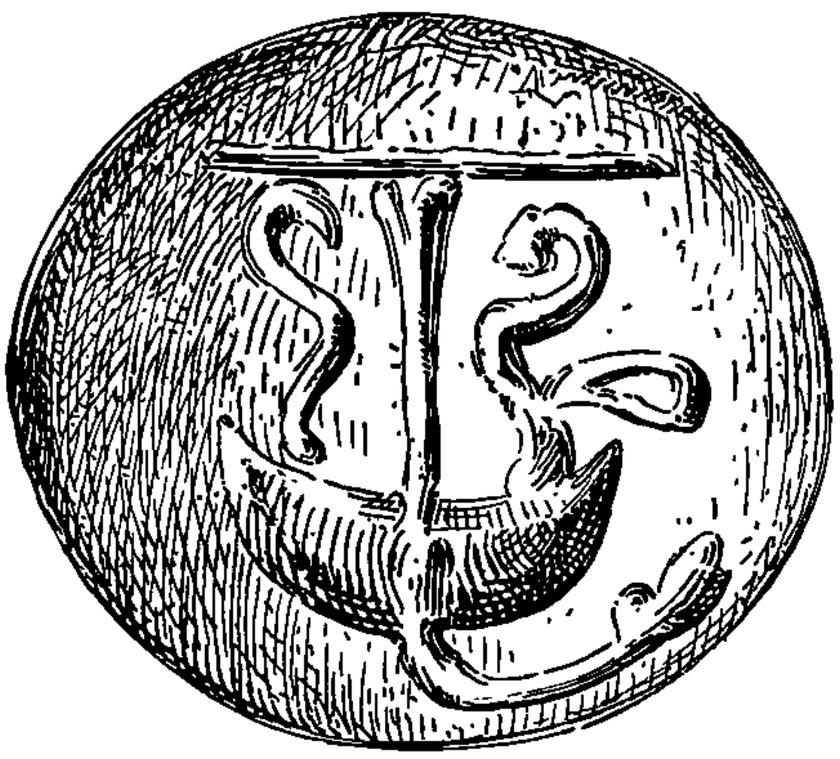


FIG. 116. SEAL-IMPRESSION FROM 'LITTLE PALACE': APPARENTLY CAULDRON WITH THREE SNAKES. BAR ABOVE. ($\frac{3}{1}$)

Tripod Hearth with Ashes enclosed.

Tripod hearth with ashes enclosed.

In the Gournià shrine, as has been noted above, was a clay tripod with remains of a stucco coating in which we must recognize one of the usual movable hearths, also probably used for offerings. A tripod hearth of the same form and construction was set before the altar-ledge in the Shrine of the Double Axes. Considering how nearly in all parts of the world the household snake cult is associated with the domestic hearth, the warmth of which is known to attract these reptiles, such an object seems to be a natural appurtenance of a little sanctuary of this kind.

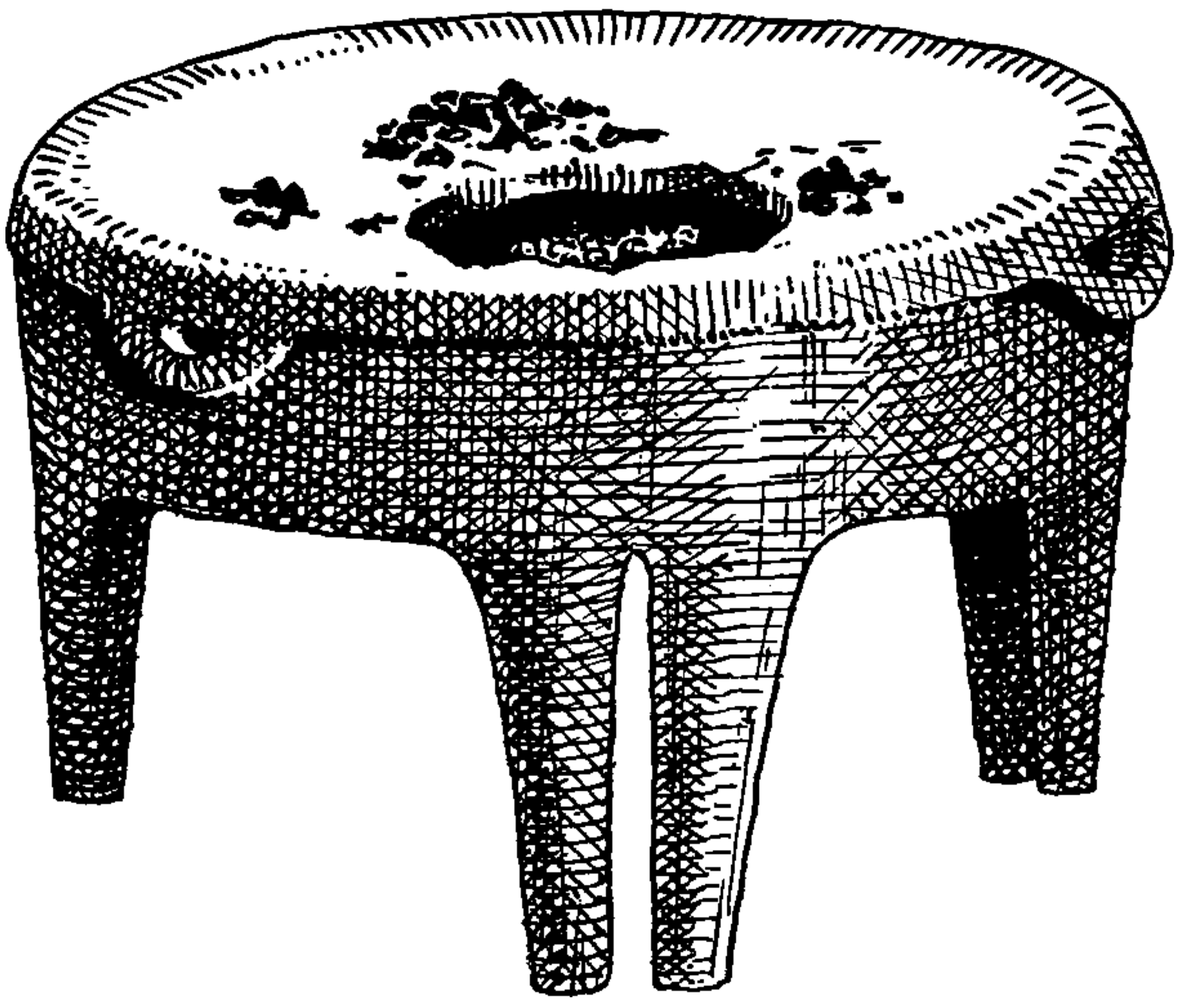


FIG. 117. TRIPOD HEARTH WITH ASHES ENCLOSED: SNAKE ROOM, KNOSSOS. (HEIGHT 13·5 CM., DIAM. 20 CM.)

A tripod stand, from the Knossos repository, with three double-legs (Fig. 117 and Fig. 109, 7) might be taken at first sight to be a movable hearth of the same kind. Its upper face, however, consisted of what resembles a flat lid with two perforated ears, which had been moulded on to the section below. A break in this cover disclosed the fact that the interior had been filled with ashes while, from the blackening of its walls, it further appeared that it had enclosed live charcoal.

[1] It is possible to compare the snakes rising from shields seen in profile with the boss below on a black-figured vase, *Corpus Vasorum* (France), Fasc. 7, Pl. 29, Figs. 4, 5.

Comparison of Ritual Transportation by Russian Peasants of Ashes from former Homestead.

Ritual transportation of ashes: Russian custom.

It may well be asked what ritual end may have been served by this repository of ashes, itself resembling a tripod hearth, placed amongst the other fittings of this snake sanctuary. The connexion of snake and hearth, as already noted, is obvious enough—but why this careful conservation of extinct embers?

A natural explanation, however, suggests itself. May not the ashes, so religiously preserved within this hearth-shaped object, have been transported on the occasion of a family removal from some earlier domicile?

Here, again, an illuminating commentary may be found in the usages of the same ethnic area that has already supplied such a useful parallel in the case of the 'snake table'. When a Russian peasant family is about to migrate to a new home the eldest woman of the household lights a fire for the last time in the stove—the recognized dwelling-place of the Domovoy or domestic Spirit, conceived of in the shape of a snake—after which she deposits the burning embers in a clean jar, and, turning to the 'stove corner', says 'Welcome *dyedushka* (grandfather) to our new home!' The fire-containing vessel is then carried to the new dwelling, where it is solemnly welcomed again in the same manner by the master and mistress, with offerings of bread and salt to the household Spirit. After this, the embers, still burning, are emptied into a niche of the new stove, while in this case the jar itself is broken and buried beneath the 'front corner' of the house.[1]

Snakes as Spirits of the Household.

Snakes as spirits of the household.

The idea that snakes, to whom the warmth of the domestic hearth was a natural attraction, represent the Spirits of dead kinsmen and the ancestors of the household is itself of world-wide extension.[2] In Classical times it is best illustrated by the Snake Genius of the Roman household, and snakes

[1] For a full account of these customs see W. R. S. Ralston, *The Songs of the Russian People. as illustrative of Slavonic Mythology and Russian Sociai Life*, pp. 137, 138. Some analogy to this is presented by the old English custom (also Serbian) of preserving part of the Christmas log to light that of the succeeding year. Cf. Herrick, *Ceremonies for Christmasse*, 1648 ed., p. 278:

'With the last yeere's brand
Light the new block.'

[2] This belief, for instance, is general in India and extends from the Arab population of Egypt and their kinsmen of Malta throughout the African Continent to the Zulu Caffres. Cf. Frazer, *Adonis, Attis, Osiris* (*Golden Bough*, ed. 3,vol. i), p. 82 seqq. These beliefs extend to America. The Delaware, Ojibway, and other Indians regard the snake as their grandfather. (See Frazer, *Spirits of the Corn and of the Wild*: *Golden Bough*, vol. ii, pp. 218, 219.)

haunt graves as impersonations of departed members of the family.[1] In more modern Europe, as in the above case, its best and most abundant illustrations are supplied by the relatively somewhat backward members of the Litu-Slavic group. In Serbian peasant families, where such a 'house snake' is often found, it goes by the name of *domachitsa* or house-mother, and the death of such a snake portends that of the house-wife herself. In the course of researches in the Konovlye (Canali) district of South Dalmatia[2] I myself came across many cases where a snake of the kind was known to live near the hearth. Food, generally in the shape of milk, was put out for it, and so far from being thought harmful, it was regarded as little short of a sacrilege to kill such a reptile. At times a pair were tended in a household so that the *domachin* or house-father was represented as well as the *domachitsa*.[3] According to old German tradition[4] there were a male and female snake in every dwelling. There are still many tales of the milk-drinking *Unken* or 'household snake'.

Serbian, &c., parallels.

In modern Greece, as in Albania,[5] the same domestic cult survives, and the snake is known as the 'master of the house,' *νοικοκύρης*,[6] a term

Snake 'house guardian' among Greeks.

[1] In the case, indeed, of the huge snake that coiled round the tomb of Anchises, Aeneas was in doubt, *Aen.* v. 95:

'Incertus geniumne loci famulumne parentis
Esse putet'.

[2] As in so many other cases, this ethnic group shows in a clearer form old religious beliefs once shared by the more advanced and sophisticated Teutonic peoples. Among these, however, the traces of the same cult are well authenticated. (See Grimm, *Deutsche Mythologie*, pp. 571, 572.) Professor Martin Nilsson, who has rightly insisted in the importance of this primitive cult in Minoan and Mycenaean Greece, has given his personal experiences of such domestic snakes in Sweden (*The Minoan-Mycenaean Religion*, pp. 280, 281), where reference is also made to E. Hyltén-Cavallius, *Wärend och Wirdarna* (1868, II, Appendix, p. xxx seqq.). Olaus Magnus, *Historia de Gentibus Septentrionalibus* (1555 ed., p. 776) says: 'Sunt etiam domestici serpentes et penates in Aquilonis extrema plaga reputati qui lacte vaccino vel ovino nutriti cum infantibus sub tectis ludunt et plerumque in cunis, ut fidi custodes, dormire videntur; quos laedere pro piaculo existimatur.' Otherwise, Olaus, too, turns to Lithuania (p. 97; lib. iii, c. 1) for his illustrations of snake-worship.

[3] The observations here recorded are from notes made by me in 1887. A priest with whom I stayed more than once got into serious trouble with his parishioners for killing a snake less than twenty paces from a house. I heard many stories of treasure-guarding snakes, secured by means of the herb *nerast.*

[4] See Grimm, *D. M.* (650), and cf. Thorpe, *Northern Mythology*, i, 284. The soul is supposed to issue in the form of a snake. When the house snakes died the master and mistress of the house died too.

[5] For the *Vittore* or household snake in Albania see Von Hahn, *Albanesische Studien*, p. 182. If the male stock dies out in a family the *Vittore* leaves the house.

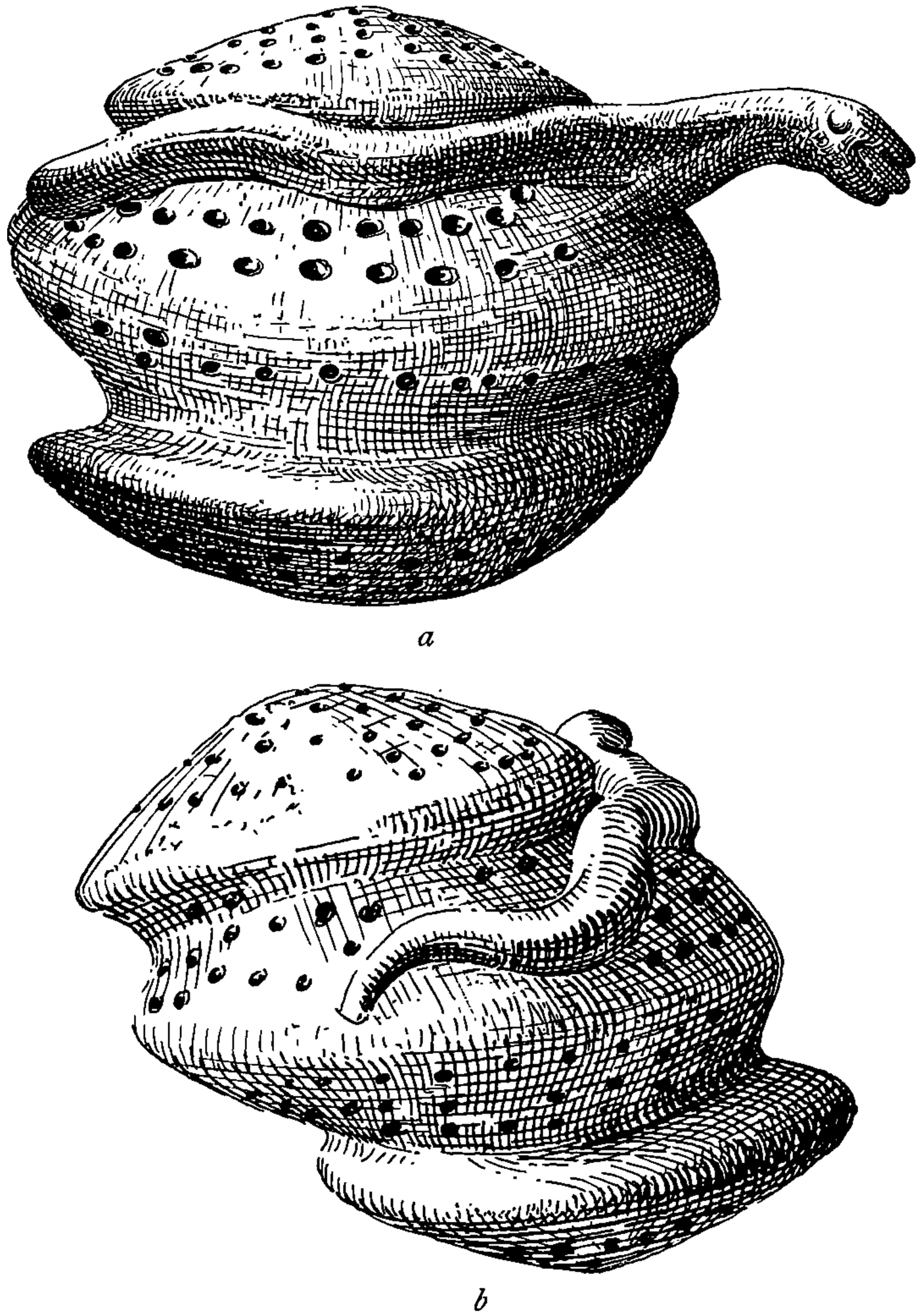
[6] Bernhard Schmidt, *Das Volksleben der Neugriechischen* (Leipzig, 1871), p. 184 seqq. Cf. J. C. Lawson, *Modern Greek Folklore and Ancient Greek Religion*, p. 260.

corresponding with the Slavonic title and representing essentially the same idea as the *οἰκουρὸς ὄφις* or 'guardian' snake of the House of Erechtheus at Athens.[1] At Arachova he who sees a snake in a house addresses it respectfully, 'My service to you, master!'

Household snake in Macedonian village: fed by British officers.

British officers stationed in a Macedonian village, deserted by its inhabitants in the Great War,. had a quaint and rather pathetic experience. In a hut used by the mess of an Artillery Brigade Headquarters, a hungry snake, thus left in the lurch, came up from a hole in the beaten earth floor as if asking to be fed, and a cup of milk was then and thereafter put out for it by the Veterinary Officer.[2]

All these evidences of this simple cult have one common feature. The snake is regarded as a kinsman, a friendly spirit bringing luck to the household.[3] The horror associated with serpents in the higher religious spheres is entirely absent.



a

b

FIG. 118 *a*, *b*. SNAKE COILING ROUND VESSEL IN FORM OF SECTIONS OF WILD HONEYCOMB, WITH A GRUB IN ITS MOUTH. (HEIGHT 9 CM.: MAX. WIDTH OF VESSEL 10·8 CM.)

[1] See below, pp. 156, 157.

[2] This account was kindly supplied me by Mr. E. J. Forsdyke, who was there stationed at the time. The name of the village, Kalinovo, suggests Bulgars as its original occupants.

[3] See, too, on this Leo Allatius (Alacci)—our earliest source for the domestic snake cult of later Greece, *De Graecorum hodie quorun-*

Ritual Vessel in Shape of Honeycomb with Snake feeding on it.

Ritual vessel of honeycomb shape with feeding snake.

In contrast to the vessels actually adapted for the feeding or accommodation of the reptiles themselves another group was represented in the Knossian repository with moulded figures of snakes about them (see

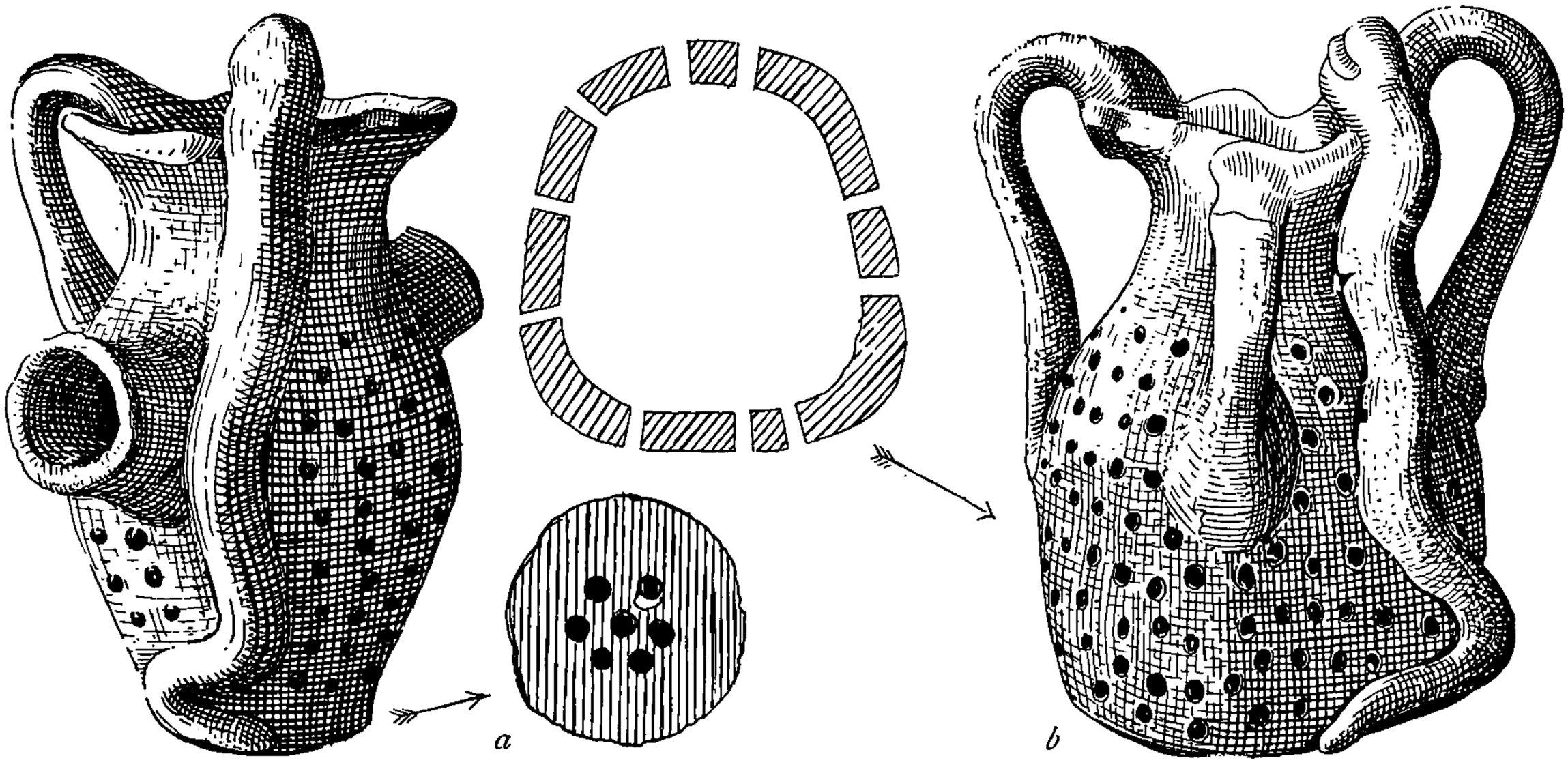


FIG. 119. *a*, PERFORATED SPOUTED VESSEL WITH SNAKE CLIMBING UP IT: A GRUB, APPARENTLY, IN ITS MOUTH (HEIGHT 10·8 CM.); *b*, ANALOGOUS VESSEL WITH THREE HANDLES (HEIGHT 10·8 CM.).

Figs. 118, 119), which must be regarded as of a purely ritual character, corresponding thus with those of Gournià and Prinià.

The most interesting of these is that shown in Fig. 109, 1, and Fig. 118, in which a snake is seen coiling round an object which, from its characteristic outline, combined with the holes that mark the cells, may be recognized as three sections of a naturally formed wild honeycomb. We are curiously reminded of the tradition, preserved by Diodorus, that Daedalus wrought a gold honeycomb for the Goddess of Eryx.[1]

In connexion with the episode here illustrated, an observation of my foreman is worth recording. Some years since, near his native village of Hierakari on the heights of Mount Kedros, South-West of Ida, he had seen a snake that had climbed up to a ledge of rock sheltering a comb of a similar kind formed by wild bees and, as he thought, eating the honey.

dam opinationibus (Cologne, 1645); bound with his *De Templis Graecorum, &c.*), c. xxxi (p. 163). Such reptiles bring good luck to the household; if one is killed the father or mother of the family is likely to die. He adds about them: 'Religione quadam observant et tantum non adorant'.

[1] Diod., iv. 78. Χρυσοῦν τε κηρίον τῇ Ἀφροδίτῃ τῇ Ἐρυκίνῃ φασιν αὐτὸν φιλότεχνῆσαι. Diodorus traditions of Minoans in Sicily have found a remarkable confirmation in the Temple-Tomb of Knossos. (See below, § 116.)

Whether snakes—like bears and horses and doubtless other animals—have a 'sweet tooth' does not seem to be ascertained.[1] That they are closely associated with honeycombs in Modern Greek popular belief may be gathered from the fact that a Genius in the form of a snake is supposed to watch over bee-hives.

Cretan snake attacks wild honey-comb for grubs.

It may well be asked, however, whether there was not a more potent attraction in the combs than in the honey itself—the grubs, namely, in the cells. It would seem far more probable that if, as my foreman's evidence shows, snakes actually attack honeycombs, it is with this object in view.

Other snake vessels from domestic shrine.

The snake, indeed, shown in Fig. 118 appears to hold a grub in its mouth. This seems also to be the case with that which appears on the little jug, Fig. 119, *a*. This, like the companion vessel, Fig. 119, *b*, is of purely symbolic formation, the holes with which it is perforated having doubtless been taken over from the honeycomb type, Fig. 118, without, in this case, having any other significance. The jug, Fig. 119, *b*, might perhaps be used as a filter, but the two spouts of the other, which could hold no liquid—its perforations extending even to its base—had certainly no utility whatever. The squat diminutive vessel, Fig. 109, 10, with deep hollows in its sides and three handles, seems to belong to the same, purely votive class.

Honey in Food-offerings made to Snakes.

Honey in food-offerings to snakes.

To what extent the popular belief that snakes like honey may be due to their taste for bee-grubs it is difficult to judge. The common practice of mixing honey with the milk offered to the household snake[2] may also be explained on the general ground that the ancestral spirit in reptile form had human tastes.[3] In any case it is clear that the idea played an important part in the ritual of the Ancient Greeks. Those who descended into the oracular cave of Trophonios were said to appease the two serpents that guarded its entrance by throwing them honey cakes.[4] Of still greater importance is the fact that the sacred snake of Athena, to which the epithet *οἰκουρὸς*, or 'guardian of the house', was applied—living in the crypt of the Erechtheion, and the incarnation of its eponymous hero—was fed

Sacred snake of Erech-theion.

[1] Inquiries made by me in the Reptile Department of the London Zoological Gardens did not elicit any information that might confirm such a conclusion except, perhaps, the fact that many kinds of snakes swallow over-ripe bananas with avidity.

[2] Instances of this from Mount Samos in Kephalonia, and from Parnassos are given by Schmidt, *op. cit.*, p. 187.

[3] The custom of pouring out honey and milk for the snake spirits of the departed recurs among the Akikuya of British East Africa. See Frazer, *Adonis, Attis, Osiris: Golden Bough* i, p. 85.

[4] Pausanias, xxxix. 11, and see Frazer, *Pausanias' Description of Greece*, vol. v, pp. 203, 204.

in the same way by honey cakes[1] thrown down apparently through a chink in the floor.[2] The snake itself was not seen.

The 'snake table' above described, with its central bowl, is analogous, in a more primitive shape, to the black steatite libation table from the Diktaean cave-sanctuary; originally it would appear set above a baetylic pillar representing the Goddess.[3] In that case I have already ventured to bring its triple cups for libations into relation with the very early offering to the Dead before the Falls of Styx, where the first libation consisted of mingled honey and milk, the *μελίκρητον*[4] that had been also the traditional food of the infant Zeus.

Triple cups of Diktaean libation table—? one for *μελίκρητον*.

Aelian[5] tells a story of a large sacred snake (*δράκων*) kept in a tower of an Egyptian town,[6] for which a subordinate priest regularly set out a bowl on a table containing the above sweet drink,[7] mixed with barley-meal, and straightway departed, leaving the sacred reptile to come out and devour it. The underling, however, too curious, looked in and saw the snake climb on the table and raise his head to make his meal. Hearing the intruder, the reptile thereupon angrily retreated, after first striking this Egyptian 'peeping Tom' with madness that ended shortly in death. Here again the table and bowl is a regular feature of the cult.

Snake table in Egypt.

[1] Herodotus viii. 41, and cf. R. W. Macan, *Herodotus*, vol. i, pt. ii, p. 416 note. For the title *οἰκουρὸς ὄφις* see Photius, *Lexicon* s. v. and Hesychius, s. v. *μαγίδες*. The non-visibility of the snake itself is alluded to in the Aristophanic gibe, Lysistr. 710 *ἐξ οὗ τὸν ὄφιν εἶδον τὸν οἰκουρόν ποτε*. For the offering of honey cakes see, too, Gerhard, *Abh. Akad.* Berlin, 1847, p. 482.

[2] See Prof. M. P. Nilsson's remarks, *J. H. S.*, xxi, p. 329.

[3] *Further Discoveries of Cretan Script* (*J. H. S.*, xvii), p. 358. In spite of the fact that the Table has a large round central prominence below for the top of a pillar or truncated cone, and four small projections at the corners for minor supports, probably of wood, Monsieur J. Demargne, who found the additional fragment of the slab, came to the conclusion that it was laid on the ground (*Bull. de Corr. Hell.*, xxvii (1902), p. 581). The sole reason alleged for this, however, was that the slab was left rough below. This view was accepted by Dussaud, *Rev. de l'histoire des religions*, li (1905), p. 32, n. 1. Nilsson, *Min. Myc. Religion*, p. 112 (cf., too, p. 221), objects to the view that it is a table-slab on the ground that 'the cutting of the central projection is not such as would imply a central support beneath it'. But there is nothing in the cutting to exclude a central support and, indeed, the slender corner props, though necessary to steady the slab, would have been inadequate to sustain its weight. The baetylic element is to be sought in the pillar or block on which the actual recipient of the offerings rests. Suggestive comparisons with the 'Diktaean Table' that still hold are given by me, *J. H. S.*, 1901, p. 17 seqq.

[4] Cf. *Od.* x. 519, 520:

Πρῶτα μελικρήτῳ μετέπειτα δὲ ἡδέϊ οἴνῳ
Τὸ τρίτον αὖθ' ὕδατι.

[5] *De Natura Animalium*, xi. 17.

[6] *ἐν* Μετήλει *τῆς* Αἰγύπτου . . . *ἐν πύργῳ*.

[7] *ἄλφιτα ἀναδεύσαντες μελικράτῳ*.

Whatever we may think of snakes having a taste for honey, it is clear that in both ancient and modern times primitive cult, in its choice of food-offerings, took very little count of reptilian diet or powers of deglutition. Honey mixed with milk might pass, and the egg set out by votaries for the serpent of Aesculapius, or by the Roman paterfamilias for the Genius of the house, is natural enough. But what are we to say to the bread and cheese, for instance, set apart for the house snake by Polish peasants, or for the barley cakes of the ancient cult, though flavoured with fennel and poppy-seeds as well as honey? The effect of such on a snake's digestive organs would hardly be less fatal than the fat, hair, and pitch that Daniel lumped together to thrust into the Dragon's mouth.[1]

In general it may be said that, however much the natural snake diet of little living things was neglected by primitive custom, the desired clearance of the board was helped out by other 'small deer'. Thus, according to a Lithuanian account, when the feast for the Spirits of the household had been laid out by the stove, they were seen to make their appearance in the shape of rats and mice, as well as snakes.

'Snake Room' of Knossian House contrasted with Rustic Shrines of Snake Goddess.

Knossian 'Snake room' contrasted with primitive sanctuary of Gournià, &c.

The contents of the repository found in the small private dwelling beside the Knossian Palace suggest some interesting comparisons with those of the little sanctuaries of Gournià and Prinià.[2]

Absence of idols and religious symbols.

In the furniture of this 'Snake room' we see two distinct classes of objects, one of them including mere utensils for the use and convenience of the reptiles themselves, the other—in which the vessels show the snakes themselves in plastic form—of a more purely ritual character, but still not presenting any distinct symbol of the more developed stage of Minoan worship. The symbols of this, such as the Double Axes and 'Sacral horns', the doves and solar disks, are wholly wanting, nor do we find, as amongst the remains of actual sanctuaries, the anthropomorphic images of the divinity in rustic form.

At Gournià and Prinià, on the contrary, the utensils such as the 'snake

[1] *Bel and the Dragon* (*Apocrypha*, A.V.), verse 27. The Dragon here signifies a large serpent.

[2] At Kumasa the evidence is less complete, and absence of the anthropomorphic idols can hardly be taken as a positive indication. The fragment of a sacred clay table (*Vaulted Tombs of Mesará*, Pl. XXXIII, No. 5020, and p. 50)—compared by Xanthudides with that of the little shrine of the Palace of Phaestos (*Mon. Ant.*, xiv, p. 479)—points however to a somewhat developed cult.

table' and the plain cylinders fitted with drinking cups simply designed for the needs of the reptiles themselves are not found. The clay cylinders are there, but the snakes in this case are modelled in relief on their walls, and are accompanied by the symbols of the developed Minoan cult above enumerated. These objects, in short, serve a purely ritual and not a utilitarian purpose.

The plastic snakes occur, indeed, on certain objects found in the 'Snake room' repository of Knossos. But while it is quite possible that the developments of the original 'snake tubes', as seen on the other sites, may have been used, as has been supposed, for the libations of a chthonic cult, the Knossian examples presenting moulded serpents were of a kind certainly not designed for that purpose. It looks even, if we may judge by the imitation honeycomb, as if they were simply made to give pleasure to the snakes themselves.

So, too, in the other cases there were found with them rustic figures of the Snake Goddess herself in the traditional shape that survived in Minoan shrines to the last. At Gournià remains of at least three such idols occurred, at Prinià, of two, besides a smaller image (Fig. 110).

'Snake room' cult purely domestic.

The evidence at our disposal leads therefore to the very interesting conclusion, that in the 'Snake room' repository we have to do with the cult in its simplest domestic form, in which the reptiles themselves, who took, or were supposed to take, the food offered, were the visible impersonation of the Spirits of the household. It would follow from this that when we find the characteristic objects of this domestic cult taken over in purely ritual form by the more universal divinity, we must recognize a distinct stage in a more advanced religious evolution.

Sanctuaries like Gournià show further religious evolution.

The great Minoan Goddess, of whom the anthropomorphic images now appear in a rustic shape, is already associated with symbols, some of which, like the dove and the Double Axe, link her worship with that of a wider area, East of the Aegean, and even imply such a formidable function as a wielder of the bolts of Heaven. But the snakes with which she is wreathed cannot, in their origin, be separated from those of the simpler cult, the evidence of which is now before us. In the little shrine of Gournià—which must be regarded as of a domestic character—she is still primarily the 'House-mother'.

Snake attributes of Goddess in Palace shrines of terrifying nature.

Sufficient proof, indeed, is given below that the snakes held by the Goddess, as seen in her Palace Sanctuary, had assumed a more deadly aspect, in accordance with her more formidable attributes on this earthquake-striken site. But in view of the more primitive evidence before us as well as of world-wide analogies, it cannot be doubted that the snakes of the old

household cult were of an innocuous breed, and regarded as beneficent Spirits. Material data, indeed, have been given in the preceding Volume of this work for concluding that the Snake Goddess herself, with all the terrors that encompassed her, still retained her original aspect of a Great Mother.

In the very latest Minoan stage, as seen within the little model of the round hut—found in company with bowls of offering similar to those of the 'Snake room'—we may still catch a glimpse of her in her most primitive guise as the Mother of the household, in fact as the anthropomorphized version of the snake itself as *οἰκουρὸς*, and under the homely form of the Serbian *domachitsa*.

Chronology of 'Snake-Tube' Sanctuaries.

Chronology of 'snake-tube' sanctuaries.

Of the domestic Shrines in which the 'snake-cylinders' occurred, that of the small sanctuary found by Dr. Xanthudides in the Settlement at Kumasa [1] is clearly the earliest. These objects were in that case associated with Middle Minoan pottery, one cup of thin fabric resembling the M. M. II *a* egg-shell class.[2] It is, indeed, reasonable to suppose that some of these 'snake-tubes' were contemporary with the M. M. I *a* water-pipe sections that served as their models. The upright cylindrical types, Fig. 110, *a*, *b*, probably represent the beginning of the series, and those of the Knossos 'Snake Room', which are incurved, fit on to this primitive type, though considerably later in date. Elsewhere, as at Gournià and Prinià, only the taper form occurs which corresponds with that of the best constructed drain sections of the Palace.[3] At Gournià the general associations of the little shrine point clearly to L. M. I *a*, and the objects from Prinià are of such a closely related character as to exclude any great discrepancy of date.[4]

[1] *Vaulted Tombs of Mesarà*, Pl. XXXIII, and p. 50. Together with the cylindrical objects, of which two are shown in Fig. 110, another occurred of conical form as well as part of a clay table, compared with that from the Middle Minoan shrine at Phaestos. No rustic figures of the Goddess are here recorded.

[2] *Op. cit.*, Pl. XXXIII, No. 5001. Cf. Fig. 100, 101, pp. 132, 133 above.

[3] In the M. M. I *a* 'Oval House' at Chamaezi the lowest part of a clay water-pipe section was found of the upright class. It had four handles round its lower extremity but was otherwise plain, to a height of 38 cm., where it was broken off.

[4] These premises being granted, it is difficult to regard the Prinià tube, Fig. 110, *f*, in spite of its decoratively arranged apertures, as being so much later than the other objects of the Minoan group found on the site as to warrant its inclusion in the same post-Geometrical series as the terra-cottas found scattered about the Prinià acropolis and which are approximately comtemporary with the early Greek temple. Dr. Pernier, however, in putting forward this theory (*Boll. di Arte*, ii, 1908, pp. 445, 446, in offprint, pp. 15, 16) mentions that the additional materials there published—the 'tube' and the head and

The jar that served as a repository of the Knossos relics rested on a floor dating from the beginning of the New Era, representing the transitional M. M. III *b*–L. M. I *a* phase, and its shape and 'trickle' decoration answer to those of contemporary vessels from Tylissos. Its use, however, as we have seen, had survived the construction of a slightly higher pavement—probably due to the epoch of partial restoration that set in on the site about the close of L. M. I *a*—while on the other hand the pottery found on its surface belonged to L. M. II, pointing to the final destruction of the Palace as a *terminus ad quem*. It seems probable that the furniture of the snake shrine found within it belonged to the last period of its use, in other words, to the latter half of the fifteenth century before our era.

Knossian 'Snake room' relics assigned to L. M. II.

Rustic Clay Idols of the Domestic Sanctuaries.

It was natural, in view of the rustic clay images associated with the other relics at Gournià and Prinià, to look on the ritual furniture as a whole as belonging to the advanced L. M. III Period, and as contemporary with the contents of the Reoccupation 'Shrine of the Double Axes' where clay images of much the same character were brought to light. According to this view—at first, erroneously, shared by myself—the upper part of the figures was set on a roughly cylindrical base that represented a 'baetylic' or aniconic object of worship. So, too, Wide would recognize a relationship with the 'snake cylinders' above described.

Rustic clay idols from sanctuaries.

But, in the face of the illustrative evidence that has come to light in recent years, there can be no real doubt that, as already suggested by me in the Second Volume of this work,[1] the cylindrical bases of these images—which exclusively characterize those of the female sex—must be regarded as part of the cylindrical base of a rude female figure—were due to supplementary excavations carried out by him at the spot where the others were discovered (nel punto di loro trovamento). He regards them as part and parcel of the same find and as altogether of the same late date. That they were formed of the same reddish local clay as the other later terra-cottas from Prinià proves nothing. That they belong to the same connexion as the other remains of clay tubes and idols from the spot where they were brought to light and are approximately of the same date may be regarded as certain. That objects of such similar types and style should have been made again on precisely the same spot after an interval of at least seven centuries is itself an incredible conclusion. It is to be regretted that Dr. Zahn (*Vroulia*, p. 32) and Professor Nilsson (*The Minoan-Mycenaean Religion*, p. 386), following in this Milani (*Studi e Materiali*, iii, pp. 118, 119), have accepted the above view that the find testifies to 'the survival of a Minoan cult and cult objects in the Archaic Age'. This does not itself exclude the possibility that the remarkable Archaic Greek shrine and sculptures found on the site of Prinià may in a general way represent an indigenous religious survival.

Cylindrical base derived from bell-shaped M. M. I skirt.

[1] *P. of M.*, ii, Pt. I, p. 342.

as a survival of the bell-shaped skirts that had become fashionable at the very beginning of the Middle Minoan Age. Such bulging skirts—that might well have been supported by hoops—constantly recur among the

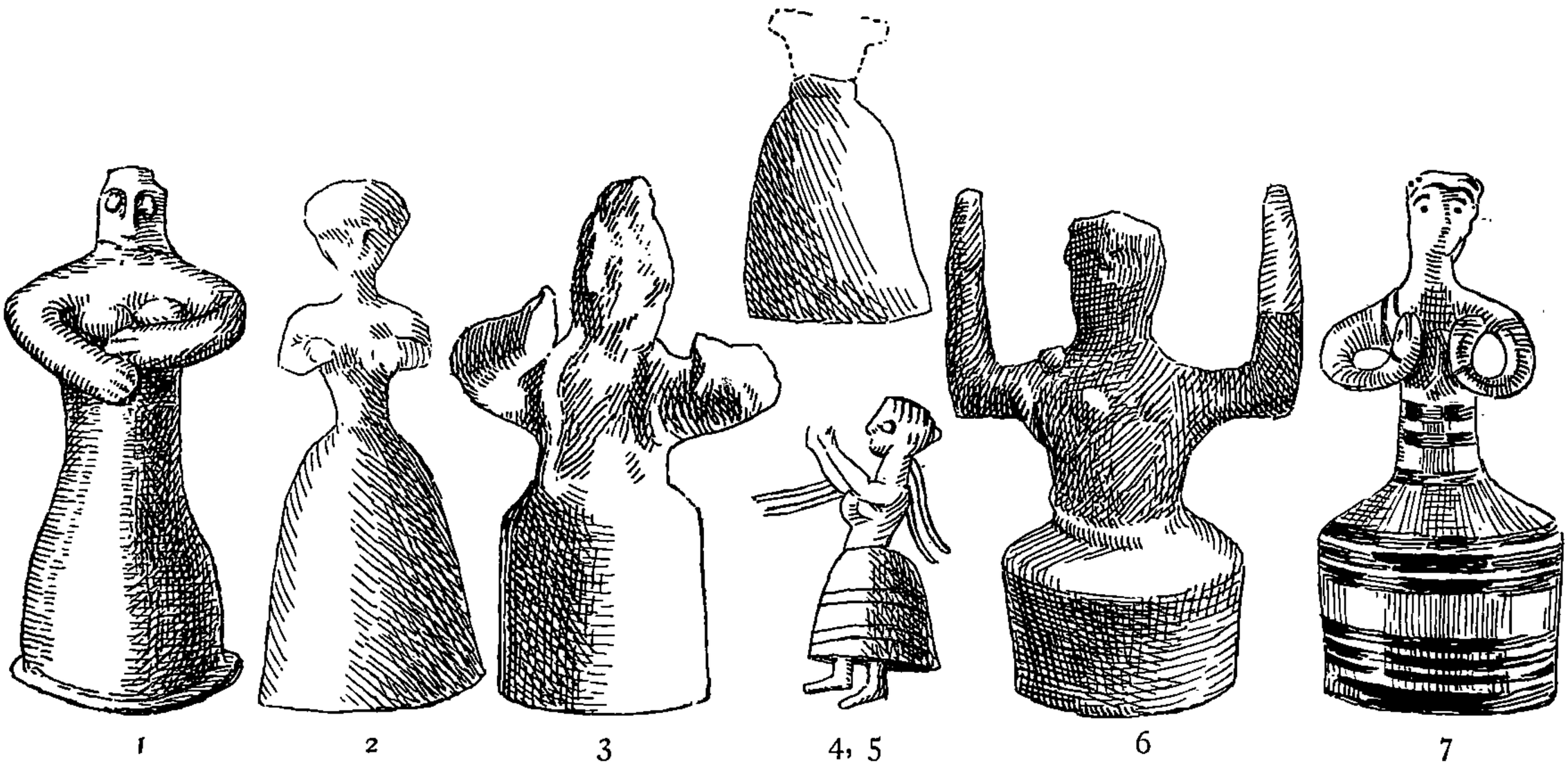


FIG. 120. CLAY IDOLS SHOWING DERIVATION OF CYLINDRICAL BASE FROM BULGING M. M. I SKIRTS. 1 EPANO ZAKRO (A.E.); 2, 4 PETSOFÀ; 3 H. TRIADA; 5 MYCENAE RING; 6 GOURNIÀ; 7 KNOSSOS (RE-OCCUPATION PERIOD: SHRINE OF DOUBLE AXES).

votive female figurines of M. M. I *a* date from Petsofà and other contemporary sanctuaries, such as is shown in the restored specimens given in Fig. 120. Their tradition indeed is still strong in the robes of the two small handmaidens on the gold signet-ring from Mycenae, with the Goddess beneath the tree, whose dress stands out almost as stiffly as that of a little Infanta by Velasquez. In the gradual slope that connects the lower part of the body with the purely cylindrical formation below, as seen on the images of Prinià and Gournià, we may note an element of transition still preserved on the figurines from a house at Hagia Triada (Fig. 120, 3), and that from the later 'Shrine of the Double Axes' (Fig. 120, 7).

In these images, then, with their cylindrical bases, we may see a rustic survival in a conventionalized form of old-time attire, in days when in more palatial circles—as can be seen from the faïence images of the Goddess—new and more elaborate fashions were in vogue. The survival itself attests the persistence of the old cult among the humbler classes of the population to the very last days of the distinctively Minoan phase of Cretan culture. But this evidence does not stand alone. Attention has already been called to the remarkable correspondence of the bowls of offering found in the Knossian

snake-shrine with those of the later shrine in the well-chamber belonging to the proto-Geometrical stage of the insular civilization. The rude figure of the Goddess, moreover, found with them, with its more or less conical body, has the same raised fore-arms.

FIG. 121. VESSEL IN SHAPE OF FEMALE FIGURE WITH SNAKES COILING ROUND THE NECK. E. M. II: KUMASA.

Early Appearance and Late Survival of Snake Vases.

E. M. II Cult Vessel.

A remarkable vessel, belonging to the Second Early Minoan Period, found in a tomb at Kumasa,[1] gives us the first glimpse of the domestic snake cult of Crete. As indicated by the two small breasts it is intended to imitate a female form, about the neck of which coil two banded snakes with their heads down (the eyes being pricked out) on either side (Fig. 121). By the finder, Dr. Xanthudides, they were taken for 'rope-like' arms.[2]

This vessel may stand in relation to a purely domestic worship. We have here, indeed, the first anticipation of snake vases such as those of the repository above described and of which a long later tradition can be traced.

Late Mycenaean vases from Ialysos.

In a very late Mycenaean or sub-Minoan tomb (No. XX) at Ialysos, Professor Maiuri found the handled vase, Fig. 122, on the upper surface of which two dark coloured snakes are modelled, drinking at a cup, the bottom of which shows an orifice communicating with the interior of the vessel.[3] In Tomb XVII there occurred a parallel type in which two serpents are painted in the flat on each side of a similar cup.[4] These are votive objects, based on actual utensils made for the use of the reptiles themselves, such as the cupped cylinder and table of the domestic 'Snake Room' at Knossos, and clearly point to the survival of this primitive Cretan cult throughout the wide area dominated by Minoan and Mycenaean civilization.

[1] Xanthudides, *Vaulted Tombs of Messarà* (Ed. Droop), Pl. II and XIX, No. 4137: and cf. No. 4933. There was an upright handle behind.

[2] *Op. cit.*, p 39.

[3] A. Maiuri, *Jalisos; scavi della Missione Archeologica Italiana a Rodi* (1926), pp. 135–7, and Figs. 58, 59. (*Annuario della r. Scuola Arch. di Atene*, vi, vii.)

[4] *Ibid.*, p. 125, and Fig. 44 (left). The access to the cup from the interior of the vessel was in this case by means of small perforations so as to filter the liquid in its passage to the cup.

There is further evidence, moreover, of the persistence of this influence in Crete to an advanced Geometrical Greek date. In a tomb at Milatos was found the pretty little flask, Fig. 123,[1] with a serpent coiled round its neck, on which is painted a human-faced crab. Its lower surface shows a rosette.

FIG. 123. LATE GEOMETRICAL VASE FROM MILATOS.

Snakes in relief, or at times painted on the flat, occur on a series of vessels belonging to the developed Dipylon style of the eighth century B.C.[2] One of the finest of these, in the Ashmolean Museum, is reproduced in Fig. 125.[3] Snakes are here modelled—four

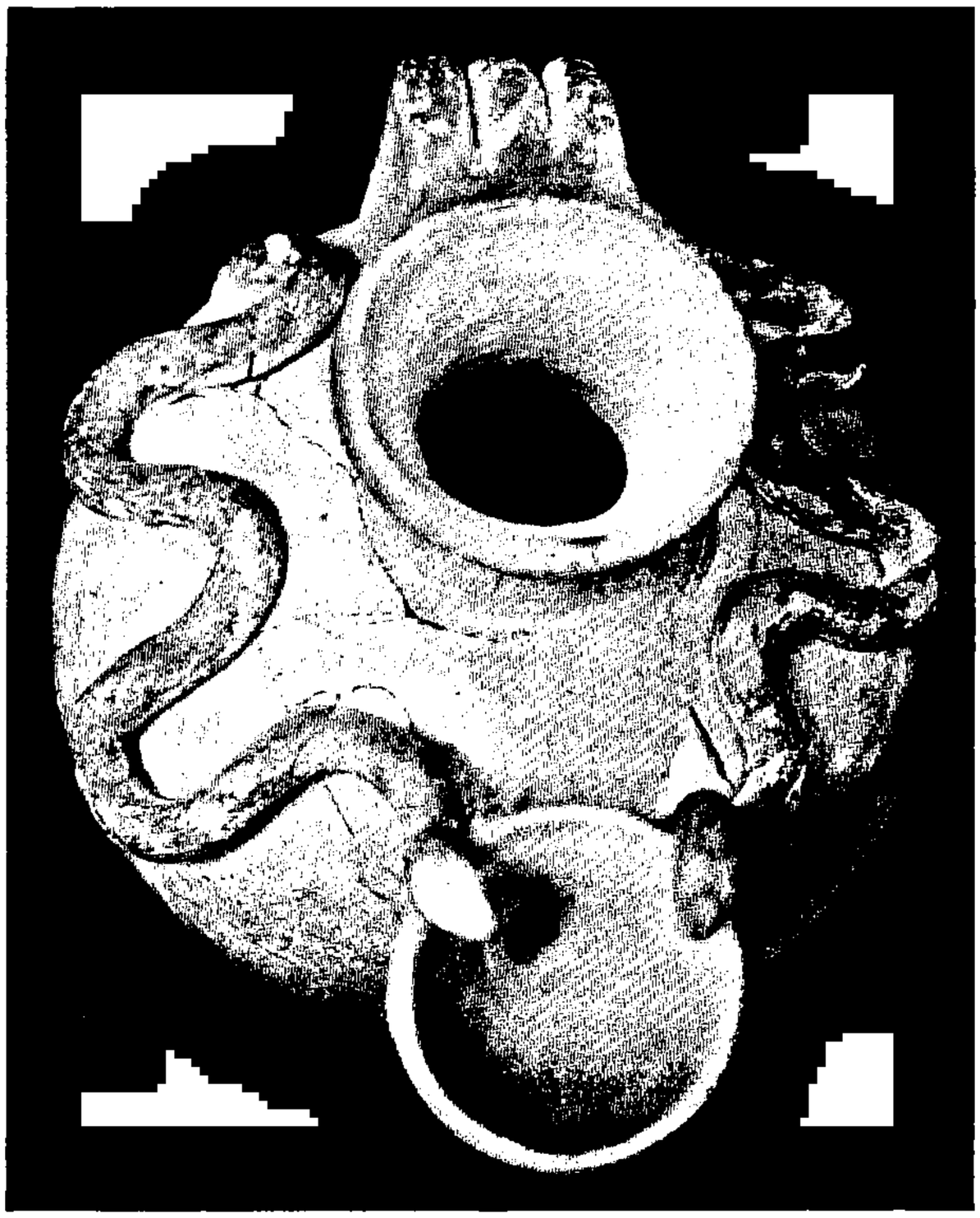


FIG. 122. VASE FROM IALYSOS WITH SNAKES DRINKING FROM ITS CUP-LIKE MOUTH.

FIG. 124. VASE FROM IALYSOS WITH PAINTED SNAKES.

Dipylon examples.

[1] Acquired by me at Milatos in 1896. Other vessels of a late Cretan Geometrical class were found in the tomb. Now in the Ashmolean Museum.

[2] Several are illustrated by S. Wide, *Grabespende und Totenschlange* (*Archiv für Religionswissenschaft*, xii, 1909, p. 220 seqq., and Pl. V).

[3] This magnificent vase was presented to the Museum by Mr. E. P. Warren (1906;

in opposed pairs—on the upper part of the body, on either side, and on the two handles, the heads upwards, while another is coiled inside the rim. In these cases the associations were all funereal and the snakes, as in the primitive folklore, may be regarded as representing departed members of the family. In the frieze round the body of Fig. 125 are depicted funeral scenes.

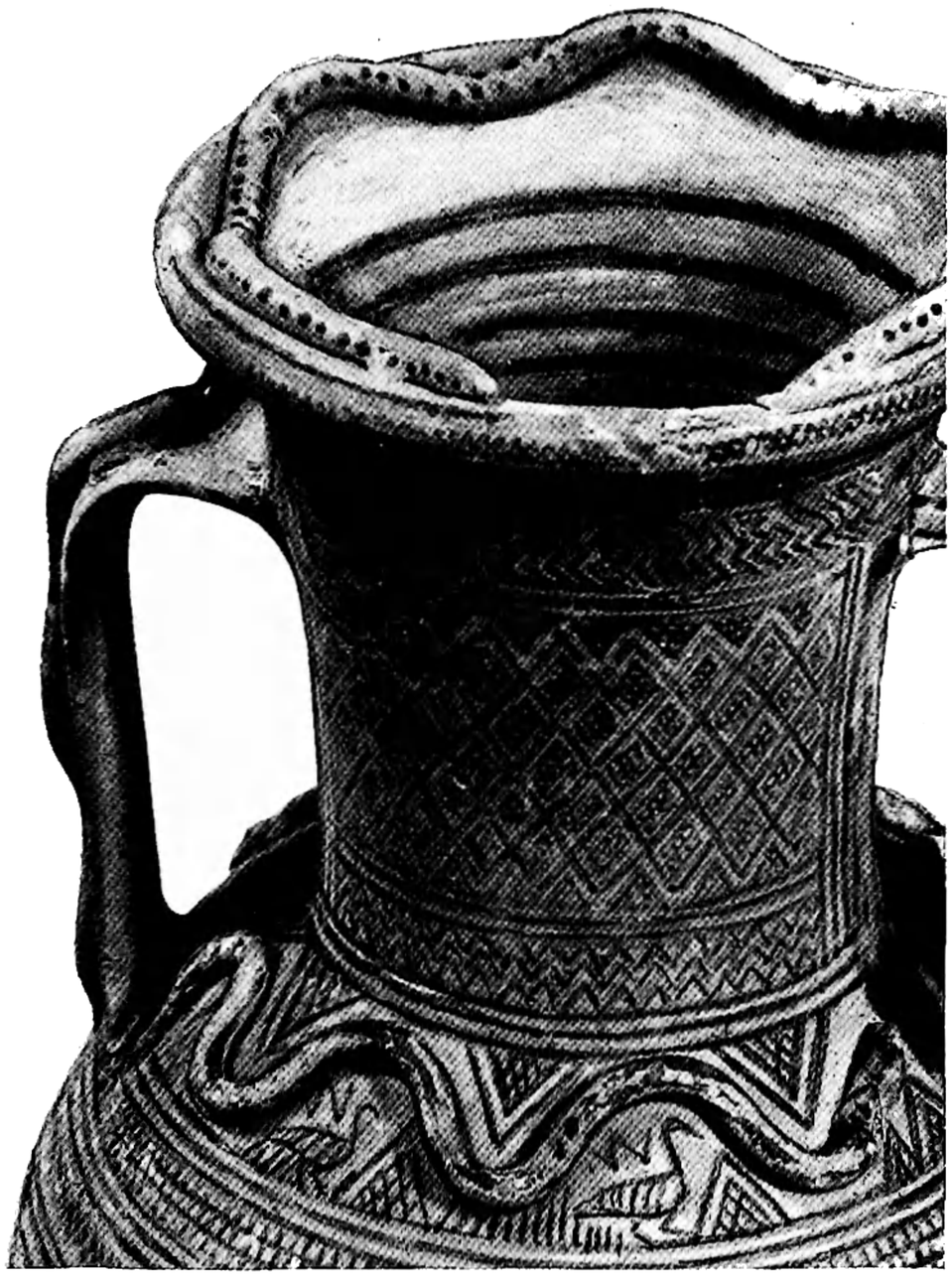


FIG. 125. DIPYLON JAR WITH SNAKES IN RELIEF: ASHMOLEAN MUSEUM.

But of all examples of Geometrical Greek fabric the most interesting is supplied by the tubular utensil from Rhodes, Fig. 126,[1] rightly compared by Dr. Zahn with the 'snake tubes' from Gournià and Prinià. We see here, indeed, similar loop handles, in this case associated with a pair of snakes, and are confronted not only with a cylindrical shape but with the same tendency towards surrounding ridges. This vessel has the peculiarity of being divided by its ridged profile into three sections, perhaps reminiscent of the water-pipes to which we have traced the origin of this class of object.

Rhodian 'snake tube' of Geometrical date.

FIG. 126. 'SNAKE TUBE' IN RHODIAN GEOMETRICAL STYLE.

Adaptation of 'Snake Tubes' to Cult of Cyprian Dove Goddess.

Under another aspect these Minoan 'snake tubes' were taken over by the Aphroditê cult of Cyprus. The clay object,[2] reproduced in Fig. 127

No. 55). It has been listed and labelled by Mr. Humfry Payne, but is otherwise unpublished.

[1] R. Zahn, *Kultgeräth aus Rhodos* (in Kinch, *Vroulia*, pp. 26–34, and Fig. 13). The object is probably from Kamiros: it is now in the Berlin Museum.

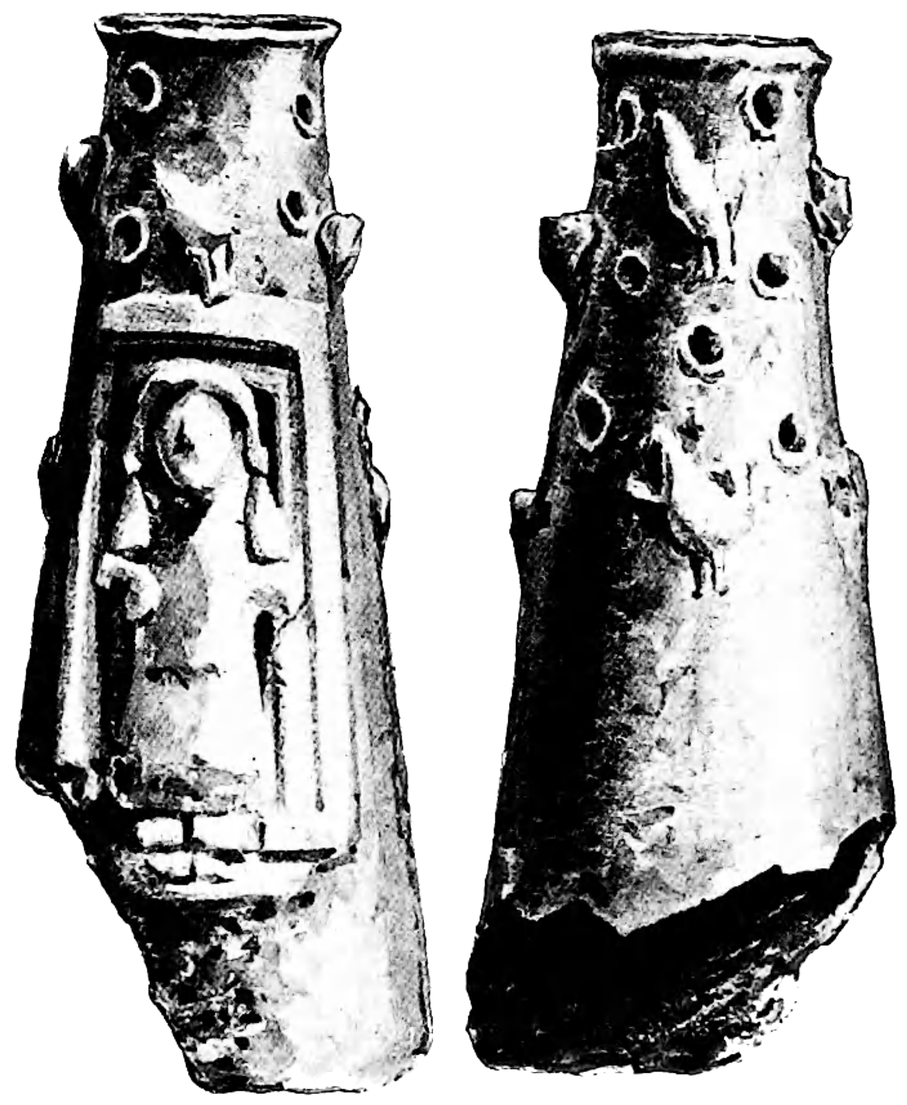
[2] Reproduced with Fig. 129 from Ohnefalsch-Richter, *Kypros, die Bibel und Homeros*, Atlas, Pl. XVII, 2, 3, 4 (and cf. vol. i, p. 287,

'Snake tube' assimilated to cult of Cyprian Dove Goddess.

from the Temenos of that Goddess at Greek-speaking Idalion, is still closely related to the early class and is of a purely cylindrical form. It differs, however, in the door-like opening below and the round hole above seen on two of its sides, which seem to have a special reference to the Cyprian religion. This may be still more clearly gathered from the other variety, of a taper shape, derived from the sanctuary at Kition[1] (Fig. 128, *a*, *b*). In this case the Goddess actually appears standing in a large doorway, while the upper contour of the tube is perforated by numerous holes, beside which small figures of doves are moulded, as if flying out of the interior. We have here, in fact, the Dove Goddess at the entrance of her sacred dove-cot.

Becomes a dove-cot.

FIG. 127. CULT OBJECT RESEMBLING 'SNAKE TUBE' FROM IDALION.



a *b*

FIG. 128 *a*, *b*. 'SNAKE TUBE', FROM SANCTUARY OF APHRODITÊ-ASTARTË, KITION, TRANSFORMED INTO DOVE-COT.

This transformation — in accordance with the then prevailing Cyprian cult[2] — of an object originally designed for the actual use of household snakes was facilitated by the fact that already in the little Cretan sanctuaries referred to, as at Gournià, we find the domestic 'snake

Figs. 187–9). It is described in vol. i, p. 169 as a 'Räucherbecken'. The general affinity of these objects with the Cretan cylinders was recognized by Zahn, *op. cit.*, pp. 30, 31. The object is in the Berlin Antiquarium: its height is 32 cm.

[1] Ohnefalsch-Richter, *op. cit.*, Pl. XVII, 2, 3, and vol. i, p. 269, and p. 287. Its height is only 13 cm.

[2] Primitive snake cult was also deeply rooted in Cyprus, witness Early Copper-Age pots and cylinder seals. Mr. P. Dikaios has now brought out at Vounous a remarkable clay object representing a household yard, with ring-dance, cattle feeding, and other domestic scenes. Against the wall opposite the arched entrance, behind what seems to be a semi-circular hearth, is a kind of double table with two ascending snakes (see Fig. 140, p. 177). In the inner space opposite appears a standing figure. (*Ill. London News*, Dec. 5, 1931: but the details were wrongly interpreted, as also in his article *Les Cultes préhistoriques dans l'Île de Chypre*, *Syria*, 1932, p. 345 seqq.)

tube' of ancestral cult taken over into the service of the Minoan Goddess in her more universal aspect, together with her Double-Axe emblem and Celestial Orb.

Strange, indeed, is this process of evolution by which a mere section of a Minoan water-pipe—haunt of the common snake—was eventually metamorphosed into the semblance of a dove-cot sacred to a heavenly Goddess!

Philistine 'Snake Tube' in 'House of Ashtoreth', Beth-Shan.

But the diffusion of the primitive 'Snake tube' by Cretan agencies on the East Mediterranean shores goes still farther afield. In the recently explored Temple of Ashtoreth at Beth-Shan in Palestine[1] there came to light remains of a series of clay tubes of the same class—open below and above—allied to the Cypriote derivatives in the openings that they show in their circumference. These themselves run parallel with those of the little 'house' shrines—also tenanted by snakes—of Beth-Shan itself[2] and of Ashur.

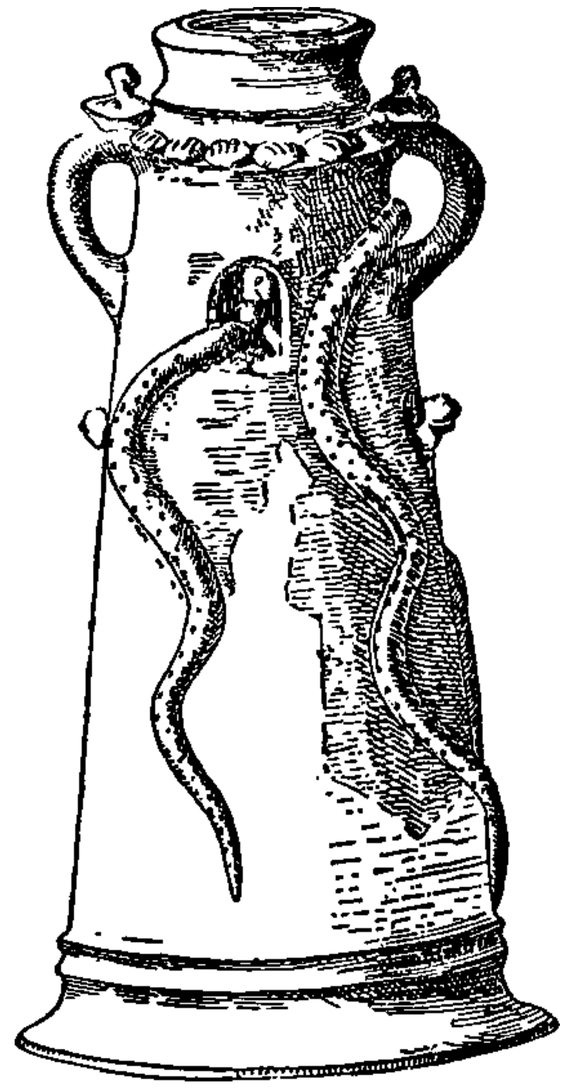


FIG. 129. 'SNAKE TUBE' FROM 'HOUSE OF ASHTORETH', BETH-SHAN.

In some ways they approach even nearer the original Minoan type, since snakes take the principal place. The most instructive specimen is that shown in Fig. 129,[3] where, while degenerate models of small doves are perched on the shoulders, spotted snakes are seen crawling in at two of the four windows and looking out of the two others.

This 'Snake tube' seems to date from about the time of Rameses III who died *c.* 1167 B.C.[4] Later cylinders of the same series show typical

[1] Alan Rowe, *The Temples of Dagon and Ashtoreth at Beth-Shan* (*Univ. Penns. Museum Journal*, xvii (1926), p. 293 seqq.). I am also indebted to the kindness of Mr. Rowe's fellow explorer, Mr. G. M. Fitzgerald, for much information. See, too, Dr. G. Contenau, *Manuel d'Archéologie Orientale*, ii, 1049, 1050, and Fig. 729 (this copy is reproduced in Fig. 129).

[2] Rowe, *op. cit.*, p. 294.

[3] *Op. cit.*, p. 299. It is there called a 'Stand'. Père Vincent (*Rev. biblique*, 1926, p. 125) had suggested that these 'cylindres évasés par le bas' might have been 'brûle-parfums' or supports of liturgic objects. Contenau, *op. cit.*, p. 1050, had also regarded them as 'supports'. But few, in view of the chain of connexion above supplied, will now contest their Cretan origin.

[4] Mr. G. M. Fitzgerald informs me that the stratum in which this specimen was found, which had first been assigned to Rameses II's time, was now shown to belong to that of Rameses III.

Philistine Geometrical decoration with rows of birds, also of Minoan derivation. It is interesting to recall that Saul's armour, taken from the field of Gilboa, was hung up in this same 'House of Ashtaroth'.[1] King David, who seems to have driven the Philistines out of Beth-Shan about 1000 before our era and to have been responsible for the partial demolition of the Temple, may well have looked on these lasting records of the old domestic religion of Crete. The Cherethites (*Κρῆτες*) of David's Guard might still have explained to him their significance.

Supplement to § 94: 'Snake Frames' and 'Snake Knots'.

Seal Types with 'Snake Frames'.

Ritual objects on seal types: 'Snake frames'.

In the course of an early visit to the Diktaean Cave at Psychro I obtained from a villager—among other objects from the black, votive stratum—an exceptionally large lentoid bead-seal, 33 millimetres in diameter, and of Late Minoan fabric—on which, though it was fractured, through the agency of fire, the essential parts of the intaglio had been preserved, showing the Goddess between two Griffins (see Fig. 130). Above her head, which, according to a contemporary convention, is reduced to a mere knob, she supports with both hands a triple framework formed of three sinuous members, suggestive of serpents, and with their upcurved ends terminating in excrescences that might stand for snakes' heads. Each of these objects is traversed by rings at the two points where they turn upwards, and could well, therefore, represent three snakes with their bodies bound together.

Goddess with 'Snake-frame' between guardian Griffins.

This curious object,[2] in its shape suggestive of the 'Horns of Consecration' of Minoan cult, gave me the impression of forming some kind of 'snake frame' of a similar religious import. As the skins of snakes in Modern Greece and in Crete itself are still preserved as possessing certain curative or apotropaic virtues, and are also hung up in spring as charms on trees by young men of courting age,[3] it seemed quite possible that some ritual arrangement of this kind had been devised in honour of the Goddess, herself so intimately connected with the early snake cult.

On another lentoid bead-seal, from the Rhodian cemetery of Ialysos,[4] where the Goddess again appears between two Griffins, Fig. 131, the bases on which they stand are in the same way raised to a level well above the feet of the central figure. In this case the Goddess holds up two of these

[1] 1 Chron. x. 10; 1 Sam. xxxi. 10.

[2] Now in the Ashmolean Museum.

[3] See note 2, p. 183.

[4] Maiuri, *Jalisos*, p. 57, Fig, 62; Tomb X.

curving objects with snake-like heads, above the upper of which is seen a squared version of the Double Axe.

FIG. 130. CHALCEDONY BEAD-SEAL FROM DIKTAEAN CAVE.

FIG. 131. LENTOID BEAD-SEAL, IALYSOS.

This difference in level between the cult image, as we may regard it, and the guardian monsters, thus repeated, is of special interest as illustrating the ceremonially religious character of these intaglio designs and their possible connexions with some actual sanctuary. The base-lines on which the Griffins are here set doubtless represent raised cornices. They supply, in fact, a striking parallel to the painted stucco bases on which the same sacred monsters were antithetically grouped in the great East Hall of the Palace, only that there, between them, the baetylic column takes the place of the Goddess.[1]

FIG. 132. BANDED AGATE BEAD-SEAL, MUSEUM, CASSEL.

On a banded agate lentoid in the Museum of Cassel, in which the Goddess with the 'snake frame' is attended by lions, the animals are again placed on a level above that of the divinity (Fig. 132).[2] In examples from Mycenae referred to below, though both the Goddess and her lion supporters are on the same level, they are all set on the 'triple gradation' below that marks the architectonic character of the group.

[1] *P. of M.*, iii, p. 511, Fig. 355.

[2] Furtwängler, *Antike Gemmen*, Pl. VI, 5. The upper part of the design is indiscernible in Furtwängler's plate, but a line drawing is published by Nilsson, *The Minoan-Mycenaean Religion*, p. 312, Fig. 92. Fig. 132 above is from a cast kindly supplied me by Dr. H. Mobius, Director of the Cassel Museum. The semicircular line in front of the upper part of the Goddess most suggests a swing or skipping-rope.

Goddess with lion guardians.

Later on, there came into my possession from the neighbourhood of Knossos itself, a lentoid bead-seal of brown steatite (Fig. 133 *a*), presenting, in an inferior style, a similar subject but in which the Goddess, supporting

a *b* *c*

FIG. 133. LENTOID BEAD-SEALS SHOWING GODDESS WITH 'SNAKE FRAME' BETWEEN LION SUPPORTERS. *a*, KNOSSOS; *b*, *c*, MYCENAE.

the same triple frame on her head, stands between two lion guardians. A fresh light was thrown on the subject by the British Excavations initiated at Mycenae in 1920,[1] through the discovery in a tomb of the Kalkani Cemetery of two cornelian lentoids bearing a practically identical version of this subject (Figs. 133, *b*, *c*),[2] where again the Goddess appears between two lions, erect on their hind-legs and with their fore-paws held down, as in Fig. 133, *a*. Here again, on both intaglios, a double axe rises from the centre of the 'snake frame' held up by the Goddess above her head.

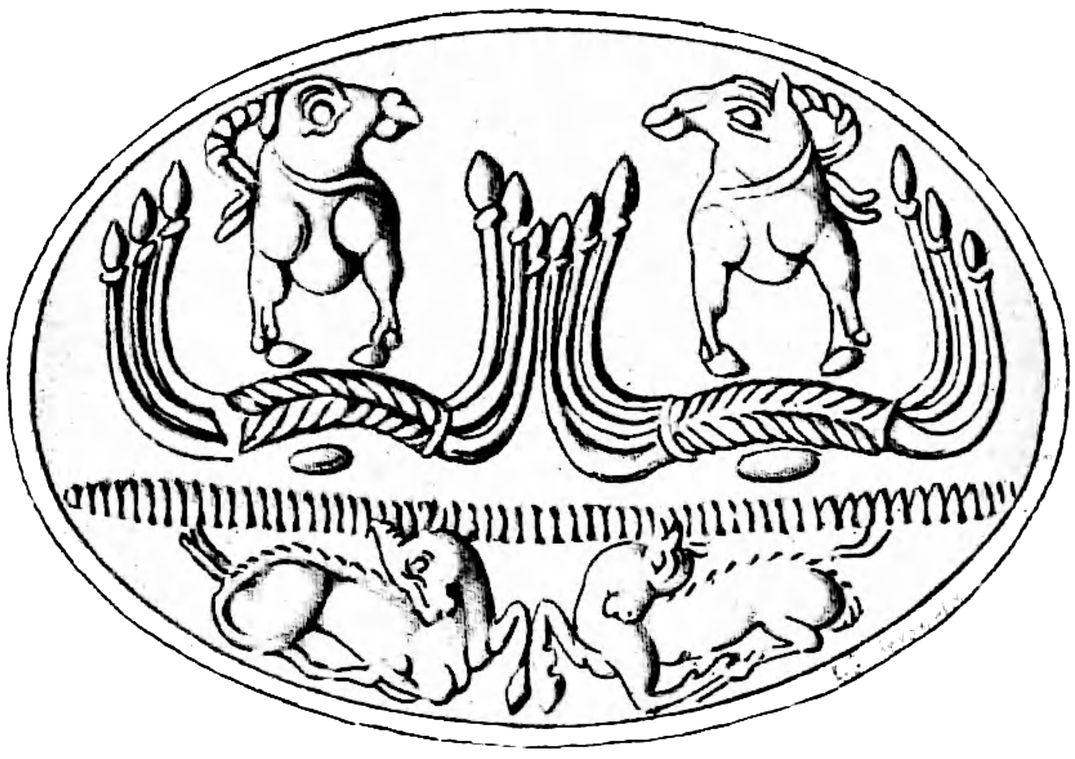


FIG. 134. GOLD SIGNET-RING FROM ROYAL TOMB, DENDRÀ. ($\frac{3}{1}$)

[1] *J. H. S.*, xli, p. 262 seqq.

[2] The casts from which Fig. 133 *b* and *c* are taken were made by the kind permission of Mr. Wace, then Director of the School at Athens. (See now his *Chamber Tombs of Mycenae*, p. 200 and Pl. XXVIII). He observes on the designs (*op. cit.*, p. 264): 'Above the head (of the Goddess) is a ritual object, formed apparently of snakes, from the centre of which rises the sacred symbolic Double Axe.' Mr. Wace recalls 'Hesychius' equalization of πέλεκυς and κύβελις', from which he draws the further natural equation of the Minoan Goddess as here seen with Kybelê or Rhea. For the cymbal and reed attributes of the Minoan Rhea cf. *P. of M.*, iii, p. 471 seqq.

In these cases the frame itself consists of only two members. Below the groups we here see, as already noted, the 'triple gradation', with clear indications of masonry.

Dendrà signet-ring.

Finally, in the bee-hive tomb at Dendrà, near Mideia, Professor Persson discovered a gold signet-ring depicting on its upper zone two 'frames' of the triple class provided with what look like small central stands, while above these objects are seen the fore-parts of two rams with their bodies facing the spectator and their heads turned towards each other (Fig. 134).[1] In the exergual space below are two couchant long-horned animals. The snake-like object here is plaited together along its middle section, a feature which, as noted below, may not be without its significance.

Here we may recognize the fore-parts of sacred rams,[2] with the ritual 'frames' placed in front of them as a sign of consecration, like the sacral horns in analogous cases. A functional analogy is thus presented to the Double Axes rising from the middle of both these cult objects.

Comparison with Cretan Bow Types. Nilotic Connexion of Earlier Class.

Comparison with Cretan bow types.

In the careful review of the evidence concerning this 'frame' type, contained in his work on the Minoan-Mycenaean Religion, Professor Martin Nilsson has appositely brought these objects into relation with those that appear above a horned head on certain seal types from Zakro[3] (see Fig. 136). He further compared the shape of these—as Dr. Hogarth had done before him[4]—with the outline of a well-known class of ancient bows. Of this equation there can be no reasonable doubt.

[1] Reproduced from A. W. Persson, *Kungagraven i Dendrá, Guldfynd och andra fynd från Utgrävningarna, 1926 och 1927*, p. 93, Fig. 92: see, too, p. 92. *R. Tombs at Dendra*, Pl. XVII, p. 55. It was first published by Prof. M. Nilsson, in his work on the *Minoan-Mycenaean Religion*, p. 311, Fig. 91, referred to below.

[2] I can see no reason for calling them 'monsters' and invoking the fantastic forms of Zakro sealings, as Nilsson, *op. cit.*, p. 311. Their facing position has been inadequately grappled with by the gem-engraver, and their forefeet are inelegantly turned in, but otherwise, surely, they are ordinary rams. For horned sheep seen in seal types as sacred animals bound to baetylic columns, see *P. of M.*, iii, p. 317, Figs. 208, 209.

[3] Martin P. Nilsson, *The Minoan-Mycenaean Religion and its survival in Greek Religion* (Lund, 1927), p. 313 seqq., and cf. Fig. 93, seal-impression from Zakro.

[4] *The Zakro Sealings* (*J. H. S.*, xxii, 1902), p. 83 He speaks of them (under No. 66) as 'two bow-shaped lines'.

Earlier form Nilotic.

In its general outline, indeed, the object might be taken to correspond with either of two Minoan bow types that were successively prevalent. The earlier of these has been already referred to in this work[1] as having not only had a long history in Crete but a still more remote pre-history on the Libyan side. This type, indeed, occurs in the hands of a Minoan archer on a M. M. I *a* half-cylinder of ivory from the neighbourhood of Knossos,[2] as well as on a contemporary three-sided seal-stone from Mallia,[3] associated in each case with an arrow of the chisel-edged type that was generally in use among the pre-dynastic population of the Nile Valley, and had a very wide North-African diffusion. This, as has been pointed out by Mr. Henry Balfour, Curator of Pitt Rivers Museum at Oxford, the greatest living authority on the evolution of the bow, should be identified rather with a type that still survives in Somaliland than with the composite horn bow so widely diffused on the Asiatic side, and the use of which extends East of Behring Strait to the Eskimos and North American Indians.[4]

The Bow of Neith.

Sacred bow of Neith.

For more than one reason my comparative sketch showing the interrelation of these Cretan and Nilotic types of bows and arrows is reproduced here in Fig. 135.[5] A feature of special interest in its bearing on the present subject is that a pair of these crook-ended bows in a kind of strapped holder was the emblem of the Libyan Goddess Neith, whose arrows were of the same chisel-edged kind and whose 'eight-shaped shield' with which they were accompanied is fundamentally of the same type as the Minoan. Neith, as already recalled in this work, who also took the form of a cow, was in some aspects of her divine being assimilated to Wazet, the Snake Goddess of the Delta, whose sacred emblem the *Waz*, or papyrus sceptre, played such a continuous part in the evolution of sacral decoration in Minoan Crete.

When we recall the extraordinary impress of the Early Nilotic culture on that of Crete and the continuous interconnexions with Egypt from the days of the first dynasties, the high probability that these relations may have influenced not only the exterior forms but the inner spirit of Minoan cult

[1] *P. of M.*, ii, Pt. I, p. 48 seqq.

[2] *Ibid.*, i, p. 197, Fig. 145.

[3] *Ibid.*, ii, Pt. I, p. 50, Fig. 23 *bis*, and F. Chapouthier, *Mallia, Écritures Minoennes*, p. 18, H. 2.

[4] See H. Balfour, *On the Structure and Affinities of the Composite Bow* (*Journ. Anthr. Inst.*, xix), 1890, p. 220 seqq. Dr. Felix von Luschan has shown that this composite bow was of very rare occurrence in Egypt (*Ueber den Antiken Bogen*, p. 193).

[5] See *P. of M.*, ii, Pt. I, p. 48 seqq. and Figs. 23, 24.

can hardly be gainsaid.[1] This influence extends to the form of primitive idols—one from the site of Knossos itself—and a stone libation table of typical pre-dynastic shape has now been brought to light in its 'Temple-Tomb'.[2]

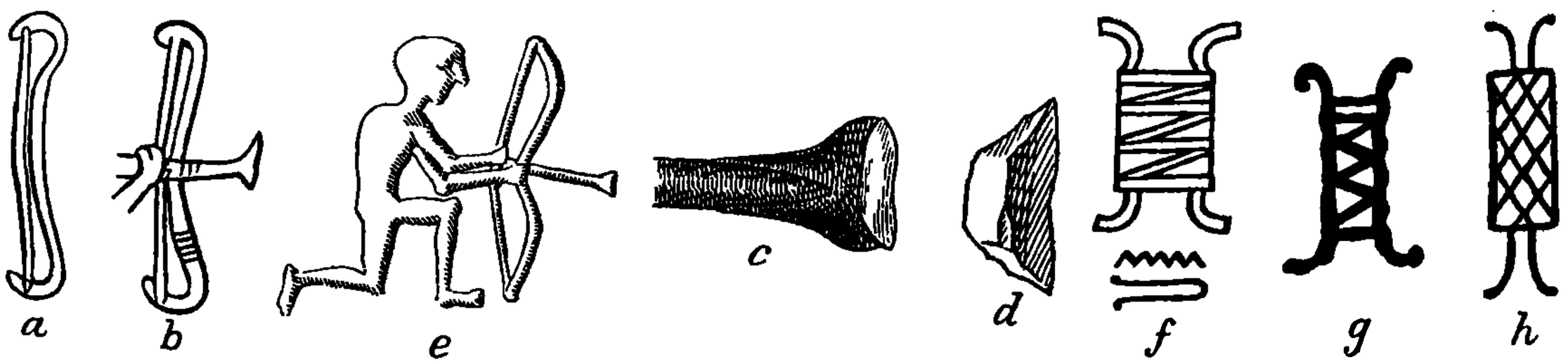


FIG. 135. CRETAN, PROTO-NILOTIC, AND LIBYAN BOWS AND ARROWS. *a*, *b*, PRE-DYNASTIC EGYPTIAN; *c*, CHISEL-EDGED EGYPTIAN ARROW-HEAD, SECURED BY BITUMEN; *d*, FLINT ARROW-HEAD, SAHARA; *e*, CRETAN ARCHER (M. M. I *a*); *f*, NEITH SYMBOL: BOWS IN SHEATH; *g*, *h*, THE SAME SYMBOL AS LIBYAN TATTOO-MARK.

Later Composite Form of Cretan Bow.

Later horn bow.

It is clear, however, that the immediate source of the special kind of bow that concerns our present subject is the composite variety. That this form of bow had itself come into general use in Crete by the Late Minoan Age is evident from the structure of bows seen in certain scenes on signets[3] as well as from the tablets relating to the horns used in its composition found in the 'Magazine of the Arsenal' at Knossos.[4] The horned bow, indeed, appears as a pictographic sign on the Phaestos Disk (inset),[5] showing that it was in vogue in a region at least intimately related with Crete by the close of M. M. III. Although in general outline it is often impossible to distinguish representations of this from the more

[1] See especially my remarks, *P. of M.*, i, pp. 509, 510, and ii, Pt. I, p. 50 seqq. Among points of comparison I have called attention to the analogy presented by the snake's head rising above the tiara of the faïence figure of the Minoan Goddess with the *uraeus* in similar positions on the head of Hathor, emphasizing the fact that Wazet the Delta Goddess was in some respect her double. Apart from any deeper indebtedness, the reaction of such a formal detail is natural enough. Professor Nilsson (*op. cit.*, p. 279, note 1), though admitting the possibility of formal influences (which indeed in the case of the *Waz* are proven to the hilt), is sceptical as to any inner indebtedness on the part of the Minoan Goddess. But there was a real ethnic intrusion from the Libyan side.

[2] See below, § 116.

[3] As for example on bead-seals depicting the Goddess hunting a stag (*Ring of Nestor*, &c., p. 23, Fig. 24, and cf. Fig. 25: Cornelian lentoid from Crete). The warrior, too, on the seal (*op. cit.*, Fig. 33) draws a bow of the same composite construction.

[4] See § 114, and *Knossos, Report*, 1904 (*B. S. A.*, x), p. 58, Fig. 21, *b*, *c*.

[5] Reproduced from *P. of M.*, i, p. 652, No. 11.

primitive Libyan type, the composite construction of the sign on the Disk is marked by the central protuberances, and in other representations the cross-lines of the sinews wound round the bow are distinctly shown.[1]

Bow-like Objects on Zakro Sealings.

Bow-like objects on Zakro sealings.

The objects seen on the Zakro sealings which show cross-lines, sometimes bordering their middle sections, sometimes nearer their points,

b

FIG. 136. ZAKRO SEALINGS WITH BOW-LIKE MOTIVES.

must answer to bows of this composite form. It should be borne in mind, however, that like other elements in the fantastic series of seal-types here seen, these are simply absorbed as decorative elements in their kaleidoscopic variations. They are grouped with lions' masks and the heads of bulls or horned sheep, above the head or below it, sometimes as a transformation of the horns, sometimes held in the mouth, occurring either singly or in pairs, and at times taking the full curve of a strung bow. Some specimens of the twofold representations above the heads are given in Fig. 136, *a*, *b*, *c*.

'Snake Frames' influenced by Holy Bow.

Influence of holy bow

The 'frames' seen in the series of signet-types given above, though their outlines conform to those of these bow-types, are themselves certainly not bows. The knobbed termination as well as the absence of any sign of the string debar such a conclusion. But the possibility remains that this

[1] The best examples of this are to be seen in the case of the bows of the young warrior and the charioteer on the gold bead-seal from Thisbê (*Ring of Nestor*, &c., p. 31, Fig. 33), and of the hunting Goddess (*op. cit.*, p. 21, Fig. 24), though the outline of the bows, which in these cases are strung, is less well characterized.

pre-eminently ritual object was influenced in form by actual bows of a sacral nature dedicated to the Minoan Goddess,[1] the existence of which we may, indeed, infer from the bone arrow-plumes found in the Repository of her Central Shrine at Knossos[2] carved and painted, as we shall see, to represent her sacred 'adder mark'.[3] Here again the bow and snake elements are combined.

Not the least prominent impersonation of the Minoan Goddess was as the huntress armed with bow and arrow, and it was in this guise, indeed, that she survived, as Diktynna or Britomartis, amongst the later Eteocretans. It has been already pointed out above that the Double Axe rising in the middle of these objects, as seen in Figs. 131, 133, *b*, *c*, itself represents an assimilation of these ritual 'frames' to the 'Horns of Consecration'.[4]

Snake frames.

That these, in fact, are 'snake frames', influenced in form by both the holy bow of the Goddess and the 'Horns of Consecration', may be thought the most probable conclusion. Their snake-like aspect, indeed, must strike all observers, and if, as seems probable, we have here a ritual object formed of the stuffed skins of two or, in some cases, of three sacred reptiles, we should not, especially when the stumped head of the Goddess herself is taken into consideration, expect much detail in the heads. In the case, however, of both versions of the Mycenae intaglio, Fig. 133, *b* and *c*, one of the eyes seems to be actually rendered in relief. The binding together of the prepared skins or bodies of the reptiles would have been a natural process in the construction of the framework.[5] In the case, however, of the signet-

[1] Nilsson remarks (*op. cit.*, p 315) that 'it may be that the holy bow of the Goddess was used as a ritual object, and also transformed'.

[2] *P. of M.*, i, p. 548, Fig. 399, *a*.

[3] See below, p. 179, Fig. 141.

[4] See above, p. 171. Nilsson (*op. cit.*, p. 315) also suggests that 'the characteristically vivid imagination of the Minoans effected a formal modification of the object under the influence of the horns of consecration'.

[5] I am unable to understand Nilsson's objection (*op. cit.*, p. 313) that the linking together of the objects as seen on the two Mycenae gems 'by three cross-bars in each of the two lower curves' would be 'evidently impossible if snakes are intended'. In the case of 'snake frames', such as seem to be implied, this binding together might rather be regarded as a necessity. The comparison made (*op. cit.*, p. 316) with the gold pendant from Aegina is interesting, but its design is of too late a date (serving, as I have shown, *J. H. S.*, 1892, pp. 201, 202, as a model for Italo-Hallstatt ornaments) to afford any real help towards the interpretation of the 'frames'. The jewel in question, which shows a male God standing on a kind of lotus-boat and grasping two swans, is, as pointed out by me (*op. cit.*, p. 198), based on a duck-hunting scene of the Egyptian Nilotic cycle. The curving objects that present a resemblance to those of the 'snake frames' start from behind the thighs of the standing figure on either side. They show cross-lines and have bud-like terminations. As a matter of fact, this scheme, as suggested (*op. cit.*, p. 199), may have been influenced by the Egyptian hieroglyphic

ring from Dendrà the bodies are actually plaited together, and this interweaving is itself a characteristically snake-like feature.

Snake Knots.

In connexion with images of the Minoan Snake Goddess and the serpentine coils with which they are associated, and of certain knots and

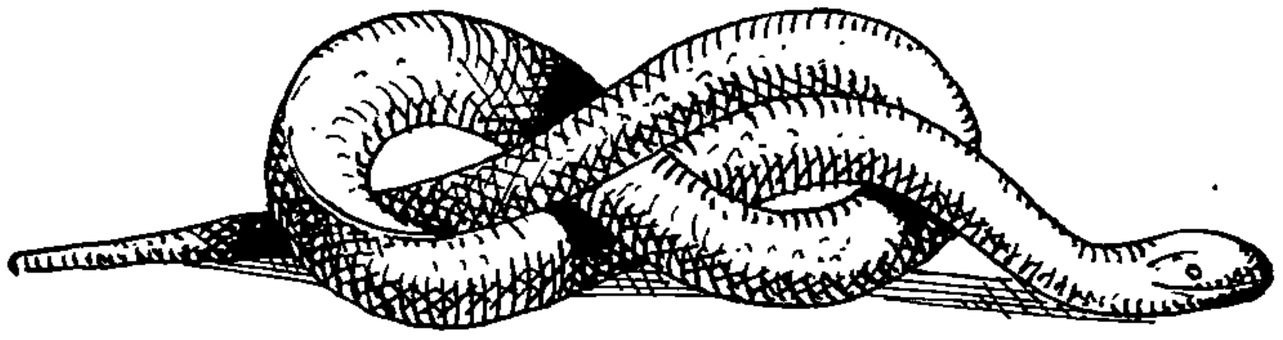
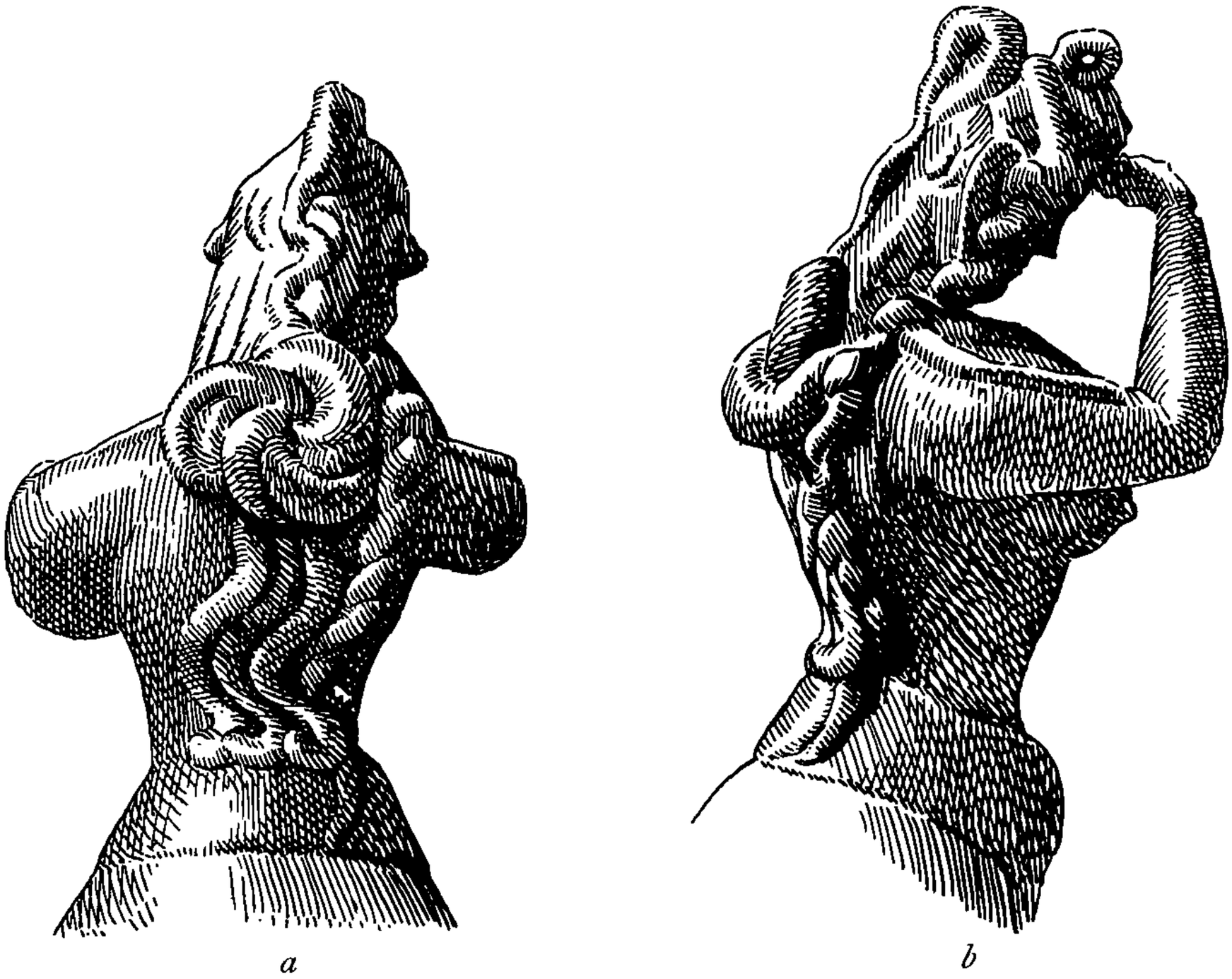


FIG. 137. SELF-KNOTTED BLIND-WORM (*ANGUIS FRAGILIS*).



a *b*

FIG. 138. BRONZE FIGURE (BERLIN MUSEUM). *a*, BACK VIEW; *b*, SIDE VIEW.

Natural snake knots and interlacings.

plait-work of a quasi-religious class, the intricate fashion in which the reptiles interlace with each other and even tie themselves up individually deserves some consideration. At times we see single knots such as that made by a blind-worm (*Anguis fragilis*), Fig. 137.[1] At times whole

symbol in which a male figure stands astride grasping two serpents whose tails cross below his feet.

[1] After a sketch by C. C. Hopley in *British Reptiles*, p. 86. Structurally, *Anguis fragilis* links on to the lizards.

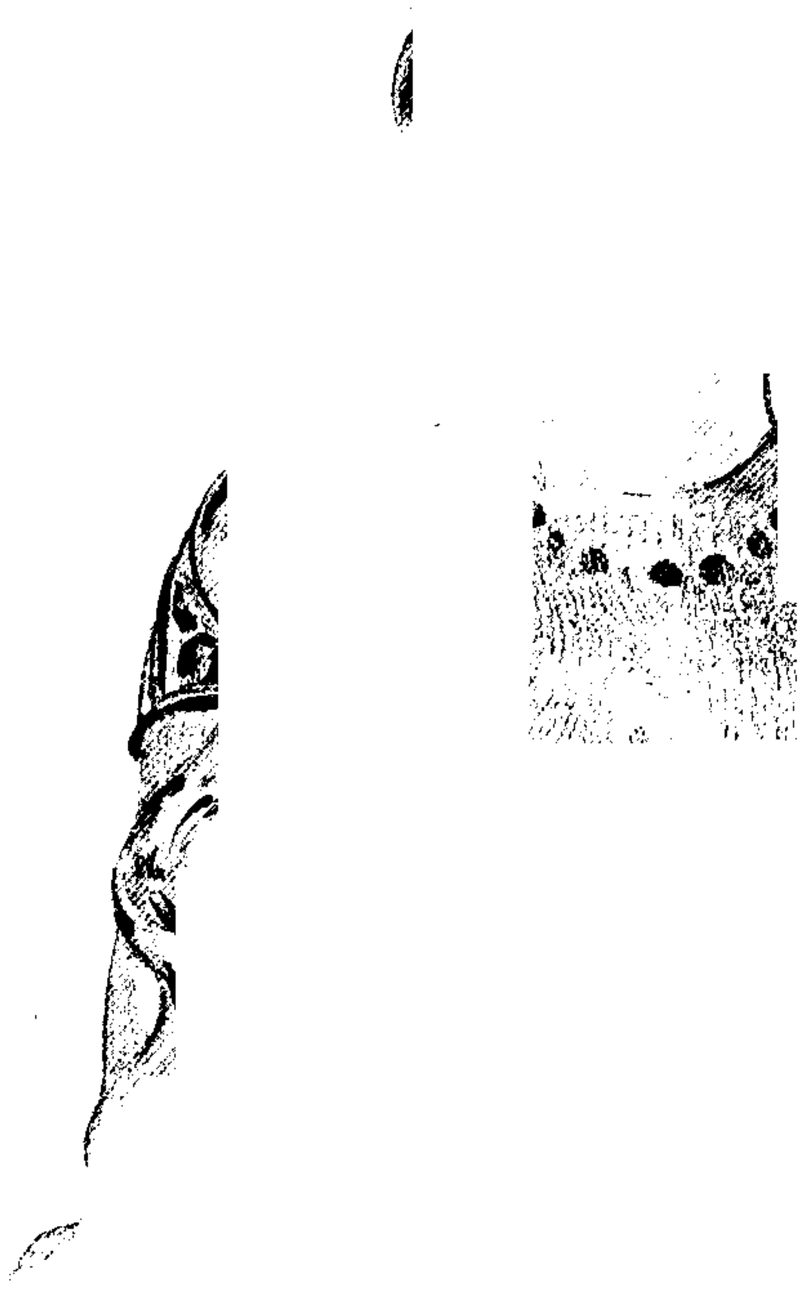


FIG. 139. UPPER PART OF FAÏENCE FIGURE OF SNAKE GODDESS FROM TEMPLE REPOSITORY, KNOSSOS, SHOWING KNOTTED-SNAKE GIRDLE AND *URAEUS*-LIKE HEAD (RESTORED) ABOVE TIARA.

families coil themselves together, as in the Viper herd shown in Fig. 140, below.[1] It is not unreasonable to suppose that the *Nodus Herculeus* itself may go back to the knotted combination formed by a pair of sacred snakes. The triple coils of the reptiles that form the girdle of the faïence figure of the Snake Goddess (Fig. 139) and those of the bronze statuette in the Berlin Museum[2]—sometimes mistaken for locks of hair (Fig. 138)—are really such as might have been copied from a living group. The plaiting together of the three members of the 'snake frames', as seen on the Dendrà ring itself, hardly goes beyond the natural interlacing of these reptiles.

[1] This figure is taken from that in the *Royal Natural History*, edited by Richard Lydekker, B.A., F.R.S., vol. v, p. 231.

[2] Reproduced from *P. of M.*, i, p. 507, Fig. 365.

FIG. 140. CLAY CULT OBJECT FROM VOUNOUS, CYPRUS, AT BACK OF WHICH IS A DOUBLE STAND TO WHICH TWO SNAKES RAISE THEMSELVES: DIKEOS. (SEE ABOVE, P. 166, NOTE 2.)

§ 95. The Sacred 'Adder Mark' and a Stone Statuette of Goddess as 'Snake Mother'.

Part I. The 'Adder Mark' of the Goddess.

*Sacral use of 'Wave and dot' pattern; Its appearance round movable tripod hearths at Knossos; Such hearths also used as altars; Fixed hearth of Mycenae Megaron—'Wave and dot' motive on its successive layers of painted plaster; Source of motive in markings on Adder's sides; Similar markings on Cretan Cat-snake, locally regarded as Viper—*Ὄχεντρα; *Motive as executed round L. M. I* b *ritual vessels with handles terminating in snakes' heads; Goblets from Knossos and Phaestos; Motive on Phaestian vessel associated with Double Axe; Snake as beneficent Genius in primitive cult, but, as attribute of Chthonic Goddess, acquires more awesome significance; Chaldaean analogy in case of Tiamat; Snakes of Goddess in mature cult viperine; The 'Adder Mark' of the Goddess; Etruscan parallel from Grotta dell' Orco—Demon Tukhulkha with similar 'Adder Mark' on wings as well as snake; Minoan survivals of this sacral motive, but absence of Greek tradition; Suggested Virgilian allusion; Possible Anatolian links with Etruria; Diffusion of sacred 'Adder Mark' to Egypt and appearance on axe-head of King Aahmes; Ceramic use in L. M. I* b *and element of 'Palace Style', L. M II.*

As to the extent to which Minoan Religion in its higher aspects had assimilated the domestic snake worship, striking evidence is afforded by the characteristic attributes of the artistic images of the Goddess in faïence and ivory, where the serpents coiled round body and limb, are held forth to the votaries and emphasize her chthonic side. A chance observation made by me, supported by some singular corroborative evidence, renders it possible to trace to the same reptilian source a decorative motive constantly found in direct or indirect association with the divinity.

Sacral Use of 'Wave and Dot' Pattern.

Sacral use of 'wave and dot' pattern.

This is the pattern consisting of waves and dots, the sacred character of which had been already made patent by a series of objects standing in a religious connexion that had come to light in the course of the Excavations. From the vivid execution of notched reliefs against a vermilion background on the arrow-plumes found in the 'Temple Repositories', and

the recurrence of similar decoration on the wings of the sacral Griffins and Sphinxes, both carved and painted (as shown in the decorative fragment reproduced in Fig. 141), it had seemed appropriate to derive it from this source, and refer to it by the general term of the 'notched plume' ornament.

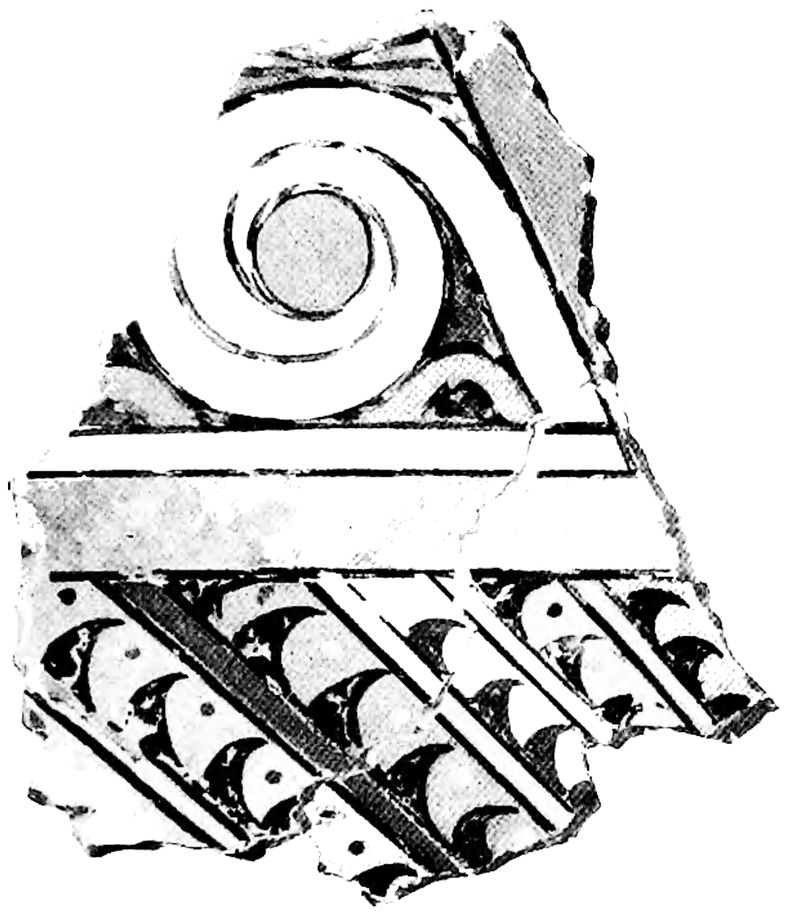


FIG. 141. WAVE AND DOT ORNAMENT ON DECORATIVE FRAGMENT OF GRIFFIN'S WING FROM KNOSSOS.

But there was one obvious difficulty about this derivation. The notching of feathers such as the votive arrow-plumes accounted for only one part of the pattern. The dot—sometimes a mere dash, often shown in the embellished form of an asterisk—with which it was regularly accompanied remained unexplained.

'Wave and Dot' Motive on Hearths at Knossos and Mycenae.

Moreover, this form of decoration was not by any means confined to plumes or wings. We see it on the flounces of the chryselephantine 'Boston Goddess',[1] as well as on those of the bronze figurine with the snake-like tresses in the Berlin Museum.

Its appearance round movable tripod hearths at Knossos.

Of the use of this sacral motive in relation to domestic cult the best proof is supplied by its appearance on the border of some fragments of movable hearths[2] with tripod feet that were obtained from the first discovered 'Kouloura' of the West Court, which went out of use about the end of M. M. III, when it was paved over for the enlargement of the Court at the time of the Great Restoration. These fragments were of hard painted stucco on a clay core, representing a type of constant recurrence among Minoan remains, and which certainly had an offertory or sacrificial, as well as a domestic character. A hearth of this shape was found, as we have seen, in the little 'Snake' sanctuary at Gournià,[3] and another in the later 'Shrine of the Double Axes'. In the Priest's House at Niru Khani, indeed, whole stores of these came to light among the ritual furniture of the 'Double Axe' cult.[4] Movable tripod hearths or altars, with a similar stucco facing,

Such hearths also used as altars.

[1] *P. of M.*, iii, p. 441, Fig. 305.

[2] See *P. of M.*, i, p. 551.

[3] See above, p. 143.

[4] *Ibid.*, ii, Pt. I, p. 283, and see Xanthudides, Μινωικὸν μέγαρον Νίρου (Ἀρχ. Ἐφ., 1922), p. 15, Fig. 12. Others were found at Mycenae, Wace, *B.S.A.*, xxv, pp. 224–6: Tsountas, Πρακτικά, 1886. The remains of the two excavated by the British School were found near a large conglomerate threshold,

also occurred at Mycenae, one presenting the outline of a helmet with boar's tusks on one of its feet.[1] The great 'Tomb of the Tripod Hearth' near Knossos was itself named from one of these, which actually showed the charcoal embers still resting on it. In the same way the upper surface of fragments of the 'Kouloura' hearths were much burnt.

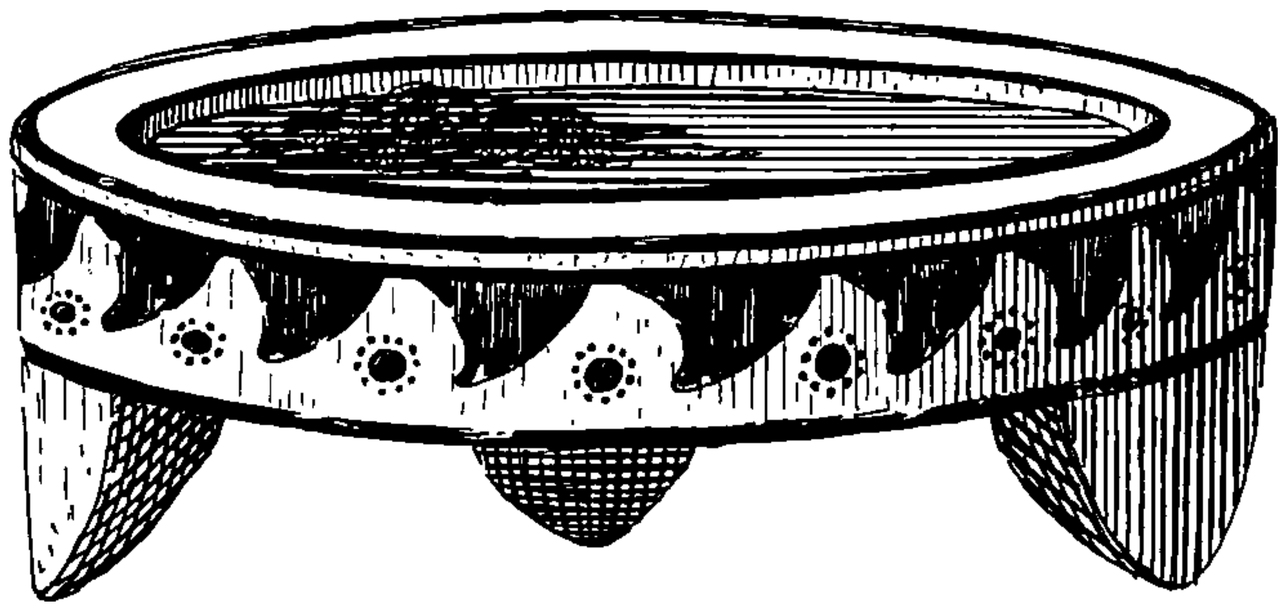


FIG. 142. RESTORED HEARTH FROM KOULOURA I (M. M. III), SHOWING WAVE AND ASTERISK.

A restored example of one of these 'Kouloura' hearths is given in Fig. 142, the ground colour of the plaster surface being here an ochreous white, and the rest of the ornament of a dark Venetian red. The waved design was executed round the outer border, the light intervals in some cases being plain, while in others an asterisk is inserted as seen in the restored drawing, Fig. 142,[2] consisting of a disk surrounded by smaller dots. The diameter of this was about 40 centimetres, which answers to the average size, but some may have been a good deal larger, as in the case of certain examples from Niru Khani, which attained over a metre in diameter.

Fixed hearth of Mycenae Megaron.

The occurrence of this design on the movable hearths of the 'House of Minos' is of the highest interest in relation to the appearance of the same sacral motive round the large fixed hearth, otherwise to be regarded as an altar, in the chief 'Megaron' at Mycenae, the core of which beneath the painted stucco was of porous stone.

'Wave and dot' motive on its successive layers of painted plaster.

Of the religious value attached there to this decoration the best proof is supplied by the constant restoration, evidently through a long period of years, of the bands on which this motive occurs. Miss Winifred Lamb's careful investigations[3] have, in fact, made it clear that these stucco bands

in a space numbered 18 on the Plan (Pl. II). Owing to their discovery the place is called a 'Shrine' in the text. But there is no sufficient reason why they may not have been actually in use in the Hall above as movable hearths. One had a boar's tusk helmet outlined on one of its feet. The wavy line seen on these is possibly a degeneration of the 'wave and dot' ornament.

[1] Wace, *B. S. A.*, XXV, pp. 224–6, and Pl. XXXVIII: Tsountas, Πρακτικά, 1886.

[2] Fig. 142 is restored from a note taken by me at the time. The fragments were set aside, but seem to have been subsequently lost in the mass of rubble materials brought out.

[3] *B. S. A.*, XXV, pp. 241–3, and Pls. XXXIX, XL.

were re-decorated as much as ten different times, a fresh painted plaster layer being on each occasion superposed on the old one.[1] These—with one or two makeshift intervals—show a constant recurrence of the sacral prototype. Only in the first layer a decorative band of older, Middle Minoan tradition is seen. The true motive—like a falling wave, or the thorns of a briar—appears in the second layer where it is seen with a plain interval in one band, and with a dash in another.[2] Later on, we see a dot amplified into an asterisk; this appears already in the third layer, and the running spiral band with which it is there coupled [3] finds an exact parallel in the similar linking of these two motives on a painted stucco fragment from Knossos.[4]

In the eighth and ninth layers the wave only appears, for the most part over-elongated and of careless execution. But the tradition at least was still preserved, and to the last the restorers of the sacred hearths in the Palace hall of Mycenae continued to perpetuate, in however decadent a shape, the symbolic mark of the Minoan Goddess of Knossos.

Source of Motive in Wave and Dot marking on Adder's Sides.

Source of motive in markings on adder's sides.

What then was the real origin of this wave and dot pattern, which already, from the Third Middle Minoan Period onwards, continually reappears in a sacral connexion and in two cases in a direct personal relation with the Snake Goddess herself?

The rooted connexion of the Minoan divinity, who is thus represented in her chthonic aspect, with the simpler cult of the household Spirits in the form of snakes, received a striking illustration from the above discovery, in the chamber of a small private dwelling overlooked by the Palace Sanctuary itself, of the whole furniture of the domestic snake cult. Among the utensils of this were objects, moreover, like the clay cylinders—in other small shrines actually associated with clay figures of the Goddess in a rustic shape—around which are coiled the snakes of humbler domestic worship.

[1] That these successive re-decorations cover a considerable period of time seems to be a natural conclusion. The remains of the Mycenae 'Megaron' must in any case be carried back to a much earlier date than was allowed for by Mr. Wace in *B. S. A.*, xxv (see especially p. 247). Regarding the hearth itself it is there noted that with the exception of 'one fragment of plain L. H. ware'—probably part of a L. H. III (L. M. III) kylix stem—'the pottery was E. H. or M. H.' i. e. not later than M. M. III (*op. cit.*, p. 243). The pottery under the column-bases yielded a similar result. Their form, moreover, and conglomerate material point to M. M. III.

[2] For the importance of the double band see below.

[3] W. Lamb, *B. S. A.*, xxv, Pl. XLI, 3 A–D.

[4] See Fig. 141, p. 179, above.

Might not the sacred mark of her more elaborate cult be itself connected with the sacred reptiles? My attention being thus directed, a chance comparison with the characteristic markings on the side of our common viper or adder (*Vipera berus*) led to a solution of the question which, as we shall see, may be said to prove itself.

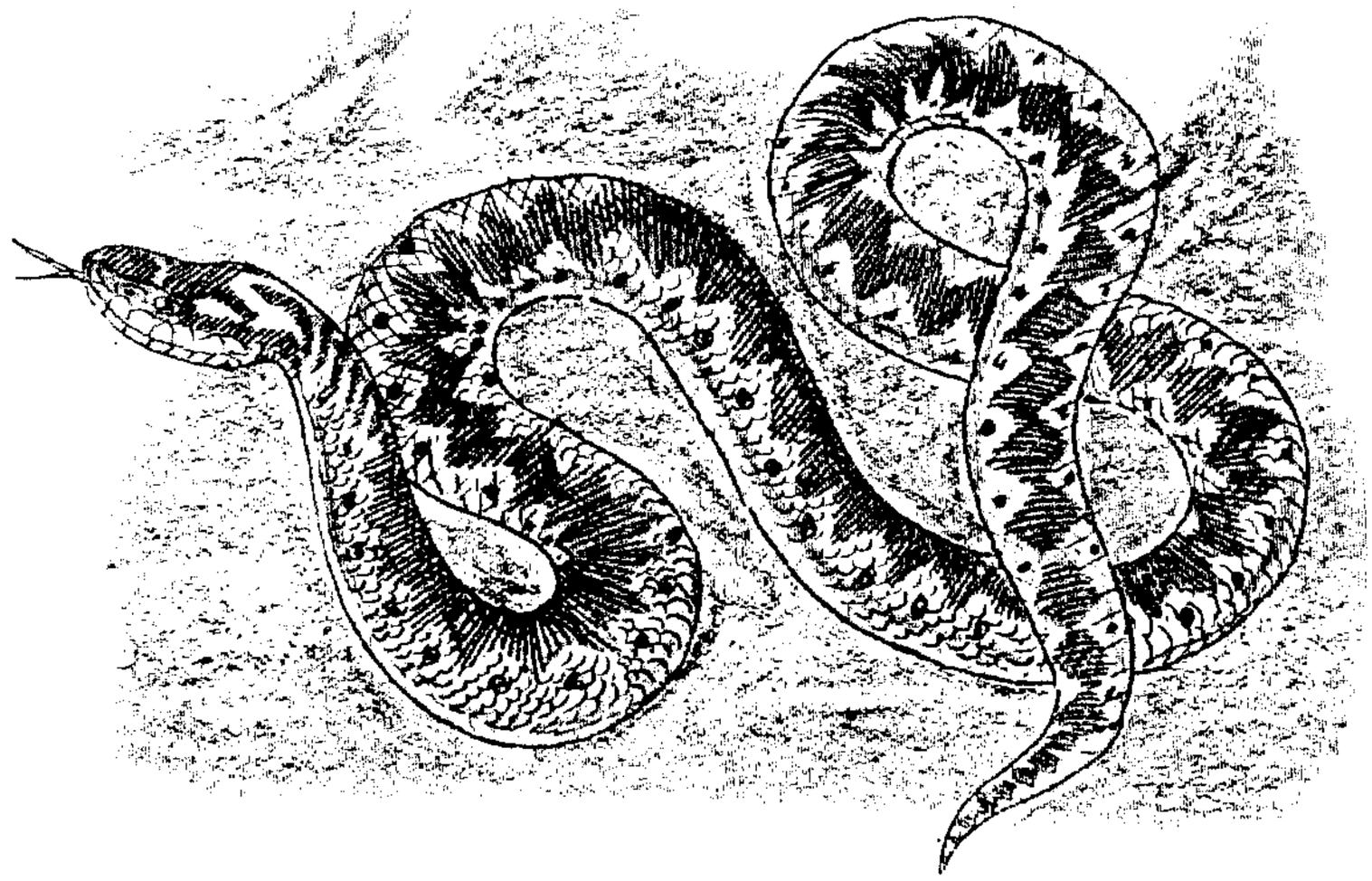


FIG. 143. COMMON VIPER OR ADDER (*VIPERA BERUS*).

These markings, as shown in Fig. 143,[1] at once suggest, in a somewhat angular form, the 'wave and dot' ornament of the Minoan 'Snake Goddess'. It seems doubtful whether the common viper, though of wide Mediterranean range, exists in the Island of Crete, but the peasants apply the same name of ὄχεντρα—the Romaic corruption of ἔχις and the Classical Ἔχιδνα—to the cat snake (*Tarbophis vivax*),[2] the markings of which, though varying as in the case of the adder, often resemble these. A section of the body of one of these from the neighbourhood of Knossos is reproduced in

Similar marks on Cretan cat snake, the local 'viper'.

[1] Here reproduced from an interesting article 'On the British Adder', by Dr. Norman Morrison, F.Z.S., in the *Review of Reviews*, 1930, pp. 405–8, Fig. 2. The markings on the back of the common viper or adder vary considerably (see R. Lydekker, F.R.S., in the *Royal Natural History*, vol. v, pp. 230, 231, and Figure), but the zigzagging effect is common to all.

[2] For illustrations of *Tarbophis vivax* see especially Georges Jan et Ferdinand Sardelle, *Iconographie des Ophidiens* (Milan, 1860–6), 38e Livraison, Pl. I, 2.

Fig. 144.[1] The finely curved outline of the upper element in the pattern here—like a wave about to break—will be seen to exactly correspond with the best early type of the Minoan sacral ornament as shown on the Mycenae hearth. In the case of this species the poison-fangs are so far back in the mouth, that, though the snake seizes lizards or other small animals with an almost immediately fatal result, its bite would under ordinary circumstances be innocuous to a human being. This circumstance, however, does not prevent its being indiscriminately killed by the Cretan countryman as a true viper.[2]

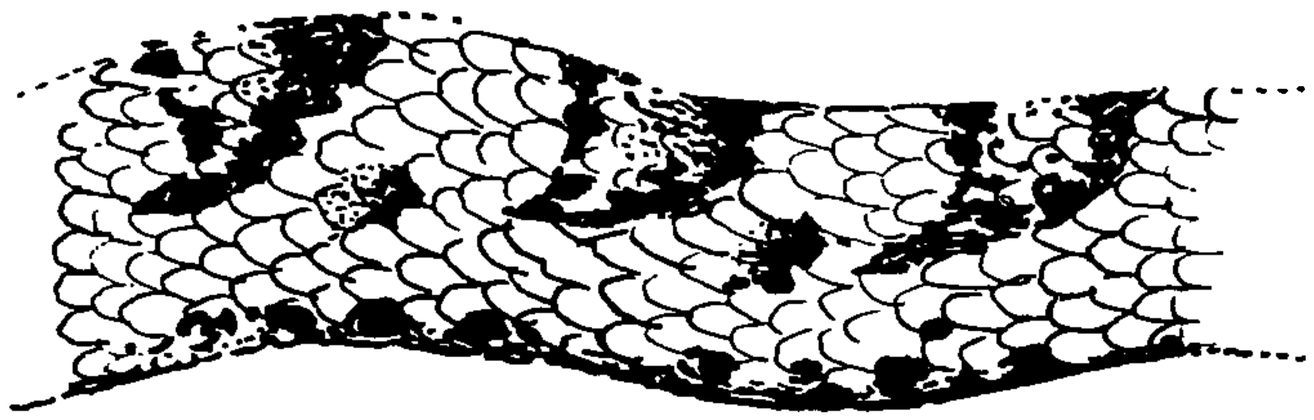


FIG. 144. SECTION OF CRETAN 'ADDER' (Ὄχεντρα) OR CAT SNAKE (*TARBOPHIS VIVAX*). ($\frac{1}{1}$)

'Wave and Dot' Pattern Round Ritual Vessels with Handles terminating in Snakes' Heads.

Motive as executed round ritual vessels with handles terminating in snakes' heads.

As a purely ceramic motive the first appearance of this 'wave and dot' pattern at Knossos, and that on a vessel specially designed for cult purposes, is of quite exceptional importance.

Several rows of this ornament are painted in dark brown on the pale ochre ground, covering its whole surface, round a very elegant one-handled goblet in the L. M. I *b* style (Fig. 145, *a*) from a Minoan house explored by Dr. Hogarth on the East slope of the Gypsàdes Hill.[3]

L. M. I ritual goblet from Knossos.

The vessel itself is clearly of metallic origin and, with its roll handle fixed to the rim and rising from it, and its body gradually tapering to the base, stands in relation to certain gold cups of a type found in the Fourth and Fifth Shaft Graves of Mycenae.[4] It also stands in relation with a

[1] From a drawing executed for me by Monsieur E. Gilliéron, fils. The specimen was kindly obtained for me by Major Wilfrid de Lacy from the quarries West of Candia. The snake was 21 inches in length.

[2] On the rocky foot-hill of Mount Strongylo—the Stromboli of Venetian Crete—West of Candia, near the new Rethymno road, then in course of construction, I watched men and boys in the month of May turning over small rocks in search for snakes of all kinds—the ὄχεντρα included—which they at once dispatched with sticks, without any discrimination. They then took their bodies to hang on trees or bushes by the road-side 'for the girls to look at'.

[3] *B. S. A.*, vi, p. 78, Fig. 123.

[4] Schliemann, *Mycenae*, p. 233, Fig. 343 (Karo, *Schachtgräber von Mykenai*, Pl. CVII, Fig. 427), Schliemann, *op. cit.*, p. 315, Fig. 477 (Karo, *op. cit.*, Pl. CXXVI). The base with a very distinct rim approaches more

whole group of pedestalled cups.[1] Its most interesting feature had not, however, been observed.

Parts of the rolled handle[2] of this painted goblet were preserved—

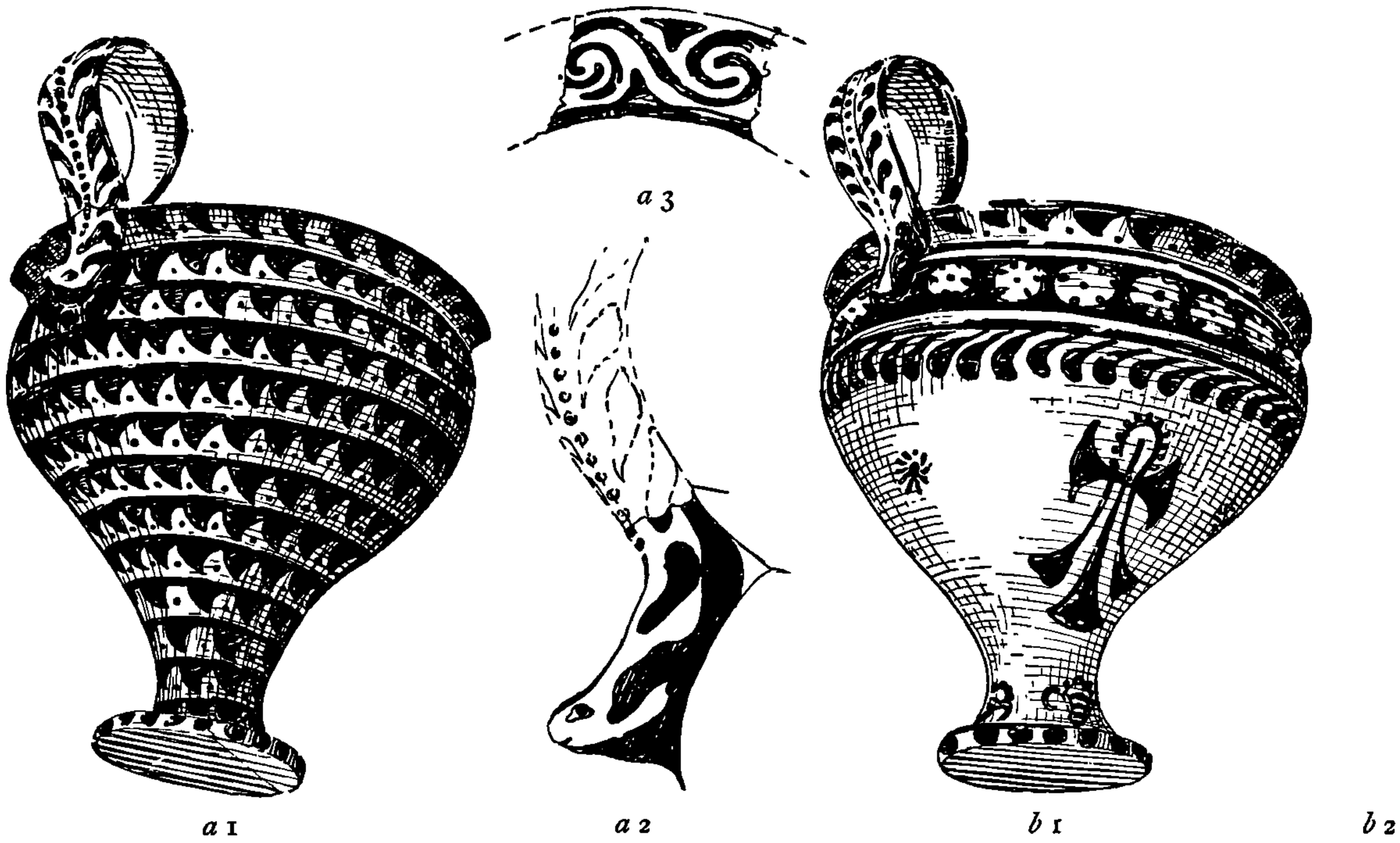


FIG. 145. PAINTED GOBLETS (L. M. I *b*) SHOWING BANDS OF 'WAVE AND DOT' PATTERN TERMINATING IN HANDLES WITH SNAKES' HEADS (*a*, KNOSSOS; *b*, PHAESTOS).

including its point of attachment and its termination—and the latter section of this is of extraordinary importance. The handle shows—under a more foliated aspect—the continuation of the wave pattern round the body of the vessel, and ends in what is clearly a snake's head (Fig. 145, *a* 2) with the eyes in relief, and the markings of a characteristic serpent's mouth.

A further light, moreover, has now been supplied through the discovery, in 1928, by Professor Pernier, of a painted clay goblet of similar

nearly that of the gold cup with the marguerites from Grave IV (Schliemann, p. 234, Fig. 344: Karo, Pl. CXI). The external disks round the margin of the base both of this and the similar painted clay goblet from Hagia Triada (Fig. 145, *b*) answer indeed to the knobs round that of the last-mentioned gold vessel.

[1] See below, p. 364, Fig. 304.

[2] Imperfectly rendered in the original figure, *B. S. A.*, vi, p. 78 (Fig. 23), the important terminal section being omitted.

type (Fig. 145, *b*),[1] with the roll handle complete. This presents the same 'wave and dot' ornament—here, indeed, encircling only the zone beneath the rim—showing also its continuation, in a double line and under the same somewhat foliated aspect, round the entire curve of the handle, as far as the terminal section. This, once more, takes the form of a snake's head (Fig. 145, *b* 2). The right eye is in relief, though obscured by a black patch, and a light reserved spot on the other side indicates the left eye.

Similar ritual goblet from Phaestos.

It is further to be observed that in this case the specifically religious destination of the vessel is marked by the appearance on each face of a Double Axe, compounded with two-legged *Ankh*,[2] and thus forming a symbolic figure very characteristic as a ceramic feature of the L. M. I *b* phase. The vessel itself was, indeed, found in company with other vases in this style, marking the date of the destruction of the Second Palace at Hagia Triada. It is of special interest to note that on band 2 of the Mycenae hearth two waved lines appear, as on the adder's back. (Compare Fig. 143, p. 182, and Fig. 148, p. 192.)

Motive associated with Double Axe symbol.

No fuller proof of the viperine connexion of the wave and dot ornament could be desired than is supplied by these examples. Once more, again, its association on the last-mentioned goblet confirms its close relation to the Double Axe cult of the Minoan Goddess.

Snake in Primitive Cult Beneficent Genius.

As has been already demonstrated, the primitive snake cult of Crete can only be regarded as representing a local aspect of what was really a world-wide religious belief in which the departed Spirits of the household were identified with the creeping things that sought the warmth of the domestic hearth. The snake thus regarded is a beneficent Genius, bringing luck to the dwelling that it haunts. It is to be hospitably entreated in every way, and its character is best declared by terms like 'house-mother' so widely applied to it. The food vessels and utensils specially devised for it, such as were contained in the repository of the little private 'snake room' at Knossos, illustrate this aspect of the cult in its simplest form. Where, again, in the little Shrines, such as those of Gournià or Prinià, we see utensils of this kind impressed into the service of a Goddess impersonated in rustic images, we have every reason to suppose that the snakes that coil about her are of this domestic kind, and

Snake as beneficent Genius in primitive cult.

[1] Thanks to the generous permission of Professor Pernier, the drawing, Fig. 145, *b*, was executed for me by Monsieur E. Gilliéron, fils, to whom Fig. 145, *a*, is also due.

[2] See my *Myc. Tree and Pillar Cult*, p. 81 and compare the Vapheio ring (*ib.*, p. 78, Fig. 52).

must, therefore, be looked on as beneficent attributes. She is, in fact, the divine 'house-mother' of a cult still closely related to the simple domestic form in which the snake itself stands as the material incarnation of the household Spirit.

Yet it will be observed that the symbols, with which, even in these primitive shrines, the cult is associated, mark the divinity there imaged as essentially the same as the Minoan Goddess of whom we have so much evidence in a higher sphere. The appearance of the sacred doves, proper to her celestial side, reveals already the beginning of the process by which one outstanding feature of the old snake cult—the clay tube—was finally assimilated to the cult of the Goddess in her Cypriote aspect. The Double Axes, on the other hand, bring the worship into line with the distinguishing element of all later Minoan Religion, which itself had such wide relations on the Anatolian side, where it is shared by the God of Lightning.

Adder Mark of Goddess regarded as Token of her Dread Infernal Power, in Land of Earthquakes.

Snake attributes of Chthonic Goddess acquire more awesome significance.

Did not, perhaps, the snake itself, which may be regarded as a primarily mild and benevolent agent when seen in these primitive surroundings, acquire a much more awesome significance as an emblem of the great Minoan Goddess in her palatial shrines?

Chaldaean analogy in case of Tiamat.

Allusion has already been made to the tendency of snakes in the higher religious phases to invest themselves with their most deadly attributes. That Ancient Serpent, Tiamat, the old 'Dragon' of Chaldaea, becomes the incarnation of the Powers of Evil, though on the libation vessel of King Gudea[1] we still see a relic of the simpler domestic snake cult in the two intertwined snakes whose tongues touch the point from which the liquid poured forth. Sufficient evidence has been given in the Third Volume of this Work that, to the last, the great Minoan Snake Divinity had not lost her more homely guise as a Mother Goddess,[2] though a more infernal aspect now prevails. On the other hand, there are good reasons for believing that her rustic images, such as we see at Gournià and elsewhere, and which in their characteristic contours go back to prototypes of the beginning of the Middle Minoan Age, were mainly of a domestic and beneficent character.

But the terrific experiences of the activity of the underground powers

[1] De Sarzec, *Découvertes en Chaldée* (L. Heuzey), Pl. 44, 2 A, B, C: cf. *Cat.* 281 and L. W. King, *A History of Sumer and Akkad*, p. 76, Fig. 29. The snakes here, intertwined with a central stem, supply a prototype of the *Caduceus*.

[2] See *P. of M.*, iii, p. 469 seqq.

could not have been without their effect. Like the earlier, the successive overthrows of the Palace in its later forms were due to seismic causes. A minor ruin that marks the end of the earlier phase of M. M. II was followed near its close by what must have been an overwhelming catastrophe. The similar disaster that befell the building about the end of the Third Middle Minoan Period was the result of another severe earthquake.[1]

Can it be doubted that the Goddess who was Lady of that Underworld from which this vast destruction issued was invested with direr attributes? Beneath the gloomy vault of her sunken 'Lustral Area', to the North-West of the Palace—now cleared of its seismic debris—the unheeded prayer of some more ancient litany may still be thought to echo—*a periculo terrae motus libera nos Domina!*[2]

Snakes of Goddess in mature cult viperine.

The evidence above cited shows that, at least from the Third Middle Minoan Period onwards, serpents of the most deadly kind had become the attributes of the Goddess in her Palace Shrines. It matters little whether the sacral mark was taken from an actual adder, or, as suggested from very similar markings of the cat snake, its Cretan equivalent, whose poison fangs were farther back in the jaw.

The 'adder mark' of the Goddess.

The common name of both snakes among the Modern Greek countrymen is, as already noted, ὄχεντρα or adder, a name connected with that of the fearsome Ἔχιδνα of Greek mythology—the Mother of the Sphinx, which itself betokens the 'strangler' or 'constrictor'. Ἔχις and ἔχιδνα are, in fact, the ancient Greek terms for the adder or viper.

Thus the token is distinctly viperine—the 'adder mark' of the Goddess as the incarnation of her dread chthonic power as the 'Earth Shaker'.

Etruscan Parallel. Adder Mark of Demon of Underworld.

In this connexion a remarkable parallel presents itself. On the volcanic soil of Italy, where subterranean forces of another kind continually threaten to break forth, Etruscan imagination called into being furies and demons of terrific aspect, in the same way wielding deadly serpents.

Who can forget the awe inspired by these active agents of Hades on a first visit to the Tarquinian tombs?—where, in the half-light, the snakes seem actually to dart forward from the walls.

[1] See *P. of M.*, ii, Pt. I, Sections 45 and 46, and especially p. 296 seqq., 'The House of the Fallen Blocks'. This house had been crushed by huge blocks over a ton in weight flung some twenty feet from the Palace wall. For an approximate chronology of a series of destructive convulsions at Knossos, see *op. cit.*, p. 320, note 3.

[2] See *P. of M.*, iii, p. 12.

Etruscan parallel from Grotta dell' Orco.

Amongst all these weird creations of the Etruscan Underworld the most hideous, surely, is the winged demon in the Grotta dell' Orco, whose threatening figure forms the background to Theseus and Peirithoos—the perpetrators of the rape of Helen.[1] The demon, whose name is given in Etruscan characters as 'Tukhulkha', has an eagle's beak and bestial ears,[2] and two serpents' heads rise like horns from his dishevelled hair. He brandishes a snake coiled round his left arm (Fig. 146).[3]

Demon Tukhulkha with similar adder mark on wings as well as snake.

The great interest of this snake in the present connexion lies in the fact that its markings show the same 'wave and dot' pattern as the adders of the Minoan Goddess, and clearly represent a similar viperine breed. The pattern here is rendered in black on a blue ground so far as the upper part of the body is concerned, the spots, however, appearing on the white belly.

More than this, the same pattern extends as a sacral border to the upper fringes of the monster's wings and is evidently intended to be carried out on their feathered parts. Once more the 'wave and dot' pattern is directly defined as an 'adder mark'.

What is really surprising in this coincidence is that the adder markings not only appear on the serpent itself but should be thence taken over as a sacral decoration on the monster's wings, in the same way as in Minoan Art the wave and dot is transferred to those of Griffins and Sphinxes.

Minoan survivals of the sacral motive, but absence of Greek tradition.

It may be said at once that direct survival of this double usage through Greek channels is altogether excluded. The 'adder mark', indeed, as a sacral pattern—as the latest layers of the Megaron hearth at Mycenae show—was there at least still preserved to a very late phase in the culture.[4] But, even in that case, the wave itself had alone been preserved. On L. M. III *b* painted vessels and hearth we see the pattern degenerating to a mere angular line.

[1] Peirithoos and Theseus 'having carried off Helen' form the subject of one of the designs of Bathykles of Magnesia on the Amyklaean Throne. Paus. iii. 18, 15: Πειρίθους τε καὶ Θησεὺς ἡρπακότες εἰσὶν Ἑλένην. A painting by Polygnotos at Delphi (Paus. x. 29, 9) depicted the two heroes in Hades, ruefully seated, bound by invisible bonds. On a South Italian amphora from Ruvo, *Mon. dell' Inst.* III, Pl. 49, Theseus is bound by an Erinys.

[2] They have been described as asses' ears, but they might be compared with those of Cerberus on late vases.

[3] *Monumenti Inediti*, and cf. Dennis, *Etruria*, i, p. 353 seqq.

[4] See Miss Winifred Lamb's researches in *B. S. A.*, xxv, pp. 242, 243, and Pl. XLI, and cf. pp. 180, 181, and p. 181, n. 1. The 'wave' mark without the dot or asterisk, but well executed, still occurs on Miss Lamb's penultimate painted layer (9 *b*). On layer 10 only a few pieces of plaster were preserved, but we may assume that the sacral pattern survived to the very last date in which the hearth was in use.

It is true that both the figures of the two heroes and their names—as is shown by the inscription ΘΕSE over that to the right—are Hellenic, as is the legendary episode itself. But the demon *Tukhulkha* is as foreign

FIG. 146. MONSTER TUKHULKHA IN GROTTA DELL' ORCO, TARQUINII.

as his name, and this fierce impersonation of the terrors of the Nether World represents the inner spirit of another race. No contrast, indeed, can be more complete than the Greek representation of Hades in similar scenes by a sceptred greybeard, mildly enthroned, and an Erinys binding the arms of Theseus as if she were a nurse administering first aid! Very different is the living and terrific picture drawn by Virgil of Tisiphonê,

Suggested Virgilian allusion.

the avenger, brandishing her scourge of venomous snakes and summoning her sister Furies,[1] where the imagery might have been actually drawn from such an Etruscan vault as the Grotta dell' Orco. May we not even detect something of the colouring and perhaps the adder mark itself as repeated on the blue ground of the back of Tukhulkha's serpent, in the Latin poet's further description of the sacred snake—*caeruleae cui terga notae*—coiling round the tomb, from the depths of which it had emerged ?[2]

Possible Anatolian links with Etruria.

We have always to bear in mind that in the case of this male Fury of the Underworld we are on Etruscan ground, and that more and more elements in Etruscan culture find their explanation in the traditional *origines* of the leading members of the stock on the Anatolian side. At Tarquinii, indeed, the correspondence of the family name *Tarkhun* with the *Tarkon*—or *Tarkun*—of Hittite personal names leads us in a somewhat special way to look in that direction.

Evidences such as are continually coming to light of contact with the Anatolian regions[3]—some part of which may be looked on as the homeland of the Etruscans—might themselves account for the assimilation of ritual forms belonging to the chthonic cult. If we are to suppose that the phenomena here presented to us were due to a continuous survival it is only, indeed, by such a subterranean channel that they can be explained. Religious tradition, doubtless, has a long memory, but the interval in time is great—some eight centuries—between the disappearance of the 'adder mark' as a symbol of sacral ornament in Minoan Greece and its reappearance in this Tarquinian tomb.

It would seem that the only alternative to this view is the supposition that—in areas geographically and culturally related—the religious adoption in each case of the pattern on the viper's side was wholly unrelated. But such a view is hardly tenable. Not only do we see the same 'adder mark' thus adopted, but it is also transferred in an identical manner to monstrous creations of the separate cults—in the one case to the wings of the

[1] *Aen.* vi. 570 seqq.

[2] Caeruleae cui terga notae, maculosus et auro
Squamam incendebat fulgor.
Ibid., v. 88, 89.

[3] If, as has been supposed, the ivory mirror handle from Enkomi (*B.M. Excavations in Cyprus*, Pl. II, No. 872), with its relief of a warrior attacking a Griffin, represents contemporary work of the neighbouring Anatolian region, it shows that the Minoan version of the monster survived there in a very pure form into the later stage, *b*, of L. M. III. The wave ornament is well executed on its plumes, though without the dots.

Minoan Griffins and Sphinxes, in the other to those of the bearded Etruscan demon.

FIG. 147. GRIFFIN ON AXE-BLADE OF KING AAHMES WITH MINOAN 'ADDER MARK' MOTIVE ON ITS WINGS.

Minoan use of Sacred 'Adder Mark'. Diffusion to Egypt and Later Association with Palace Style Pottery at Knossos.

Minoan use of sacred 'adder mark'. Appearance on axe-head of King Aahmes.

As is well shown by the remains of several 'Miniature Frescoes', as well as by the movable hearths of Knossos, the 'adder mark' motive was well represented in painted stucco designs of the finest M. M. III class. The influence of the Minoan artist in inlaid metal-work, indeed, was such that it had already made its appearance on the wings of the Griffin on King Aahmes' axe-blade by the end of the first quarter of the sixteenth century B. C.[1] (Fig. 147.[2]) The Eagle-beaked monster with the curls on his neck represents in other respects the true Minoan breed, contrasting with the usual hawk-headed type of Egypt.[3] This astonishing evidence of the reaction of a M. M. III religious type on the sacral Art of Egypt itself makes it the less improbable that the Minoan Sphinxes and Griffins

[1] The date of King Aahmes is *c.* 1587–1562 B. C.

[2] Repeated from *P. of M.*, i, p. 551, Fig. 402, from a photograph specially made for me by Mr. C. C. Edgar in the Cairo Museum.

[3] See *op. cit.*, pp. 710–12, and compare Figs. 533, A–J, Fig. 534, and Fig. 536 *a*, *b*.

may have helped to carry the Minoan 'adder mark' to the homelands of the Etruscans East of the Aegean.

Ceramic use in L. M. I *b* and element of Palace style: L. M. II.

So far as existing evidence goes, this motive was only taken over into Cretan ceramic Art at the distinctly later epoch corresponding with the later phase, *b*, of L. M. I, when we find it—in significant connexion with the heads of the sacred snakes themselves—on a class of painted clay goblets of distinctly ritual destination. In the next Period, L. M. II, which answers at Knossos to the last Age of the Palace, and with which we are here specially concerned, it becomes a conspicuous feature in the adornment of the stately jars and amphoras of the great 'Palace Style', by now fully evolved. As will be shown in a succeeding Section, it there combines with other motives of religious origin to infuse a certain hieratic character into the style itself, that made it fittingly representative of what was a Sanctuary as well as a Palace. From the painted jars it is taken over as an incised ornament on the great *pithoi* of the West Magazines.[1] In a degenerate form it survives to the latest Minoan times, and there are reasons for concluding that the Greek *kymation* pattern may ultimately represent the same tradition.[2]

[1] See Pt. II, p. 643.

[2] For a 'Geometrical' Greek link, cf. H. G. G. Payne, *Early Greek Vases from Knossos* (*B.S.A.*, xxix), p. 273, Fig. 33, 7 (Geometric). Cf. p. 270, Fig. 32, 2 (Geometric). The triangular pattern may be a more direct reflection.

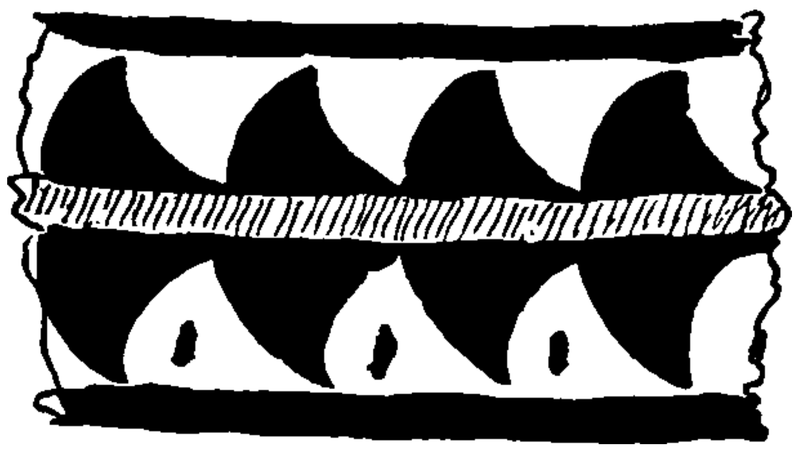


FIG. 148. SECOND LAYER OF MEGARON HEARTH, MYCENAE: 'WAVES' OPPOSED, AS ON ADDER'S BACK, DASHES OMITTED IN ONE ROW. SEE P. 181.

§ 95. PART II. **A Stone Statuette of the Goddess as 'Snake Mother'.**

New stone statuette of Snake Goddess; Existence of larger stone figures; Exceptional freedom of treatment; Motherly relation of Goddess to Snakes; Special form of tiara; Associated Clay figurine with re-curved top-knot—probably snake-holding; Votive bronzes—male adorant and Double Axes; Date of Statuette of Goddess and associated group M. M. III b–*L. M. I* a; *Contemporary with faïence figures of 'Temple Repositories'—correspondence in details.*

New stone statuette of Goddess: largest known.

THE milder and more motherly aspect that the Snake Goddess could assume even in the most advanced phase of the Cult, and in its highest artistic presentation has been singularly illustrated by the discovery of a further stone statuette of the Minoan divinity in this character, exceeding in size the other known figures. In this she appears grasping the neck and body of a serpent that is here coiled about her as if it were rather her pet than the attribute of awesome powers. (Figs. 149–151 and Suppl. Pl. XLVIIA, B.)

The statuette itself belongs to the same remarkable find of Minoan Cult figures and other relics which, thanks to the kindness of its possessors, it has been possible to publish for the first time in these pages. That already illustrated (Suppl. Pl. XLIV A, B, and Fig. 21, p. 36 above) has been shown to be substantially a replica, on a somewhat larger scale, of the figurine of the Goddess, executed in a kind of beautifully granulated marble, now in the Fitzwilliam Museum at Cambridge. Whether or not that object was found, as rumoured, in the Harbour Town of Knossos, the features of the two, both as regards style and facial profile as well as in elements of the dress such as the tiara and such minutiae as the pattern of the apron, correspond to such an extent that there can be little reasonable doubt as to both figures having belonged to the same sanctuary deposit.

Of that deposit, together with the statuette of the Snake Goddess here figured, it has been possible below to supply further details.

The new companion image—a small statue—is itself cut out of the same pale brown limestone with fine crystalline veins as that which so closely repeats the features of the Cambridge Goddess. Here also in the general style and facial features, as well as the details and pattern of the dress, this close resemblance is again very perceptible, and this, like the other two, must

be recognized as a work of the same hand (see Suppl. Pl. XLVII A, B, and Fig. 149). The image is 40 centimetres, or about 15¾ inches, in height as compared with 36 cm. in the case of the other new example and 22·7 cm. in that of Cambridge Goddess. This is therefore the largest stone figure of Minoan date yet brought to light. Like the companion figure in the same material it is carved out of a single block and not in two pieces, socketed into one another about the middle, as is the case with the Fitzwilliam statuette, the chryselephantine Goddess of the Boston Museum, and some early clay figurines.

Existence of larger stone figures.

That figures in marble-like stone, whether in a single piece or compacted together, were actually executed to twice the size of that of the Snake Goddess before us is shown by the fragment of a hand already illustrated,[1] which must have belonged to a small statue about 90 centimetres (or 2 feet 8 inches) high, but the present example is the largest of the small group of stone images that has been preserved to us. On the other hand, as regards wooden figures, we have the evidence of a colossal statue some 2·80 metres or 9 feet in height.[2]

The new snake-holding figure is here reproduced in Figs. 149, 150 and Suppl. Pl. XLVII A, B. Although, owing to the softness of parts of the material, the surface is somewhat cracked in places and a few breaks are visible, it is practically complete except for a chip on the top of the tiara and a small section of the snake held by the Goddess below her left hand.

Exceptional freedom of treatment.

A remarkable feature in this statuette, which at once strikes the eye, is the comparative freedom of action as compared with other small cult figures, whether in stone, faïence, bronze, or clay. Here we see a single reptile, the tail of which starts below the left ear, passes over the front of the head, and is grasped first in the middle of the body and then by its neck. There is nothing here of the stiff and symmetrical attitude of other figures.

The head of the Goddess is very slightly inclined

FIG. 149. PROFILE VIEW OF LIMESTONE STATUETTE OF SNAKE GODDESS (*c.* ½).

[1] *P. of M.*, iii, p. 518.

[3] *Ibid.*, p. 522 seqq.

FIG. 150. UPPER PART OF VEINED LIMESTONE STATUETTE OF SNAKE GODDESS (*c.* $\frac{2}{3}$): SMALL SECTION OF SNAKE'S BODY RESTORED.

towards the head of the snake held up in her right hand. Seen from one point of view, indeed, she seems to be gazing at it (Fig. 150), and this effect would have been certainly enhanced, had the pupils of her eyes been pre-

FIG. 151. HEAD OF STATUETTE, WITH TIARA-LIKE HEAD-DRESS (*c.* ⅔).

served in colour, as they well may have been delineated in the finished work. The snake itself looks up towards her face.

Motherly relation of Goddess to snakes.

In all this there is a human touch, and the snake that she so gently grasps seems to be brought into a certain personal relation with its divine Mistress. The reptile here is not held out as an emblem of infernal power such as it suggests in the other cases. Still less is it brandished as we see the two serpents in the upraised hands of the smaller snake divinity from the 'Temple Repositories' where the action might well recall that of the Etruscan demon illustrated above. Fat and well-liking as the reptile is here portrayed, it might well be a tame snake. The Goddess, in short, in her present incarnation is primarily a 'Snake Mother' reflecting something of the originally beneficent character of the domestic serpents themselves.

Special form of tiara.

That the Snake Goddess herself in one of her manifestations here stands before us is sufficiently indicated by her characteristic headgear, which seems to be a version of the tiara, elsewhere a conspicuous sign of the godhead. This, however, is of an exceptional kind, curving forward in three bands, as shown in the sketches, Fig. 151, *a*, *b*, *c*. The summit is flat and slightly broken off in front, but otherwise the curved effect is suggestive

of a 'cap of liberty' and of a form of head-gear of very ancient Anatolian tradition, such as we see associated with Mên, Attis, and Mithra, and also in some Amazonian types.

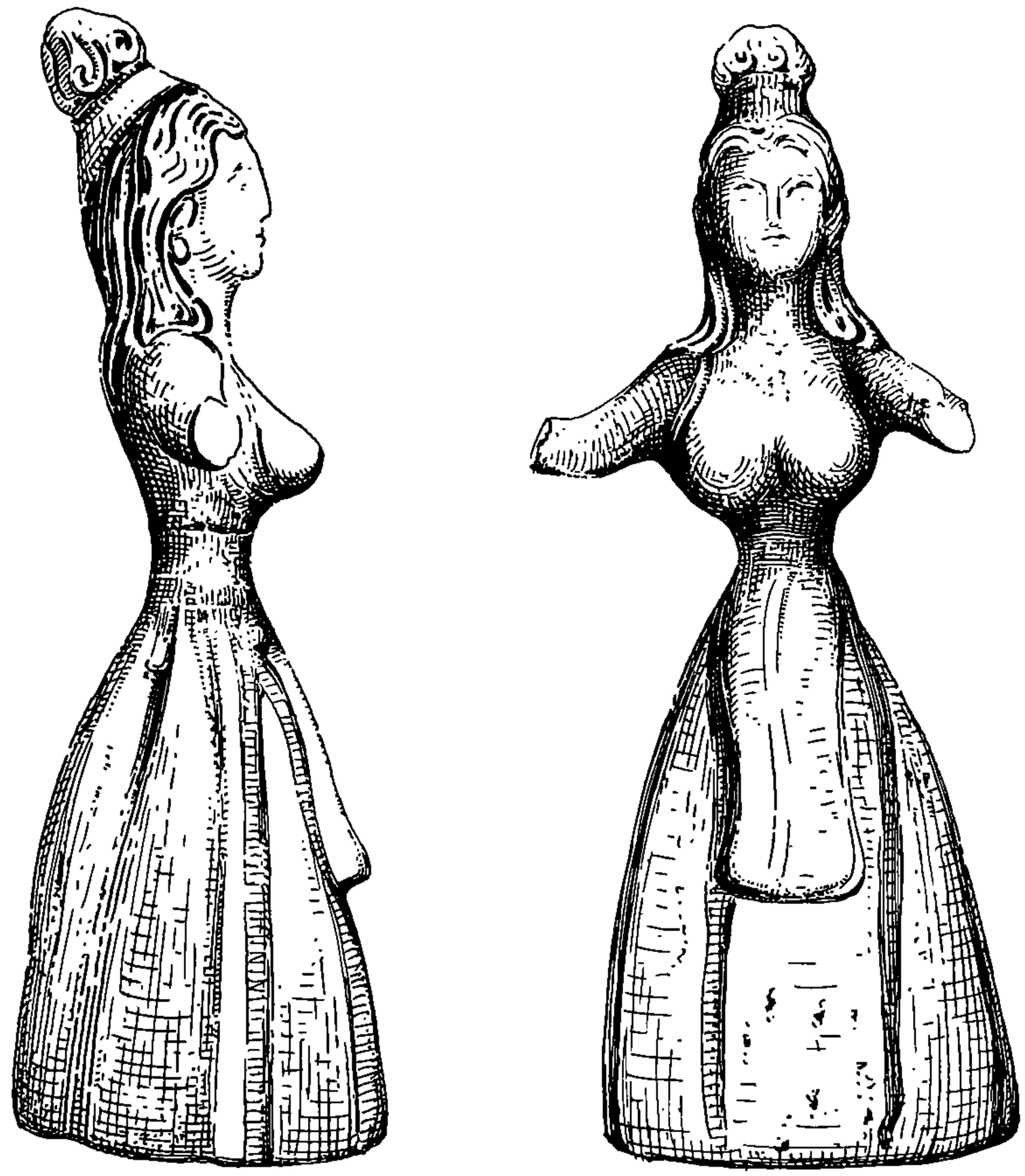


FIG. 152 *a*, *b*. TERRA-COTTA FIGURINE (HEIGHT 17·5 CM.). BY E. GILLIÉRON, FILS.

Associated clay figurine with recurved top-knot.

This head-dress somewhat suggests the coiffure of a small clay figure also found with the same group of objects (Fig. 152 *a*, *b*). The hair is here confined by a bandeau round its middle zone, from which it rises above in a top-knot somewhat curving forwards. The pale ochreous surface of this figurine is varied with red stripes and patches, probably of ritual significance. The personage represented wears the usual corset, open at the front for the ample breasts, and its lower part is distinguished by a skirt devoid of flounces, with folds running upwards. The apron is of quite exceptional form, being square-cut, and it stands out below in a manner reminiscent of the aprons of Egyptian *ushabtis*.

Figurine probably snake-holding.

The fore parts of both arms are broken off, but the attitude suggested by the parts that remain seems most compatible with the idea that she was holding forth two snakes. The figure may be regarded as that of a votary or attendant of the Snake Goddess. A clay bull was also found, of a rough votive class.[1]

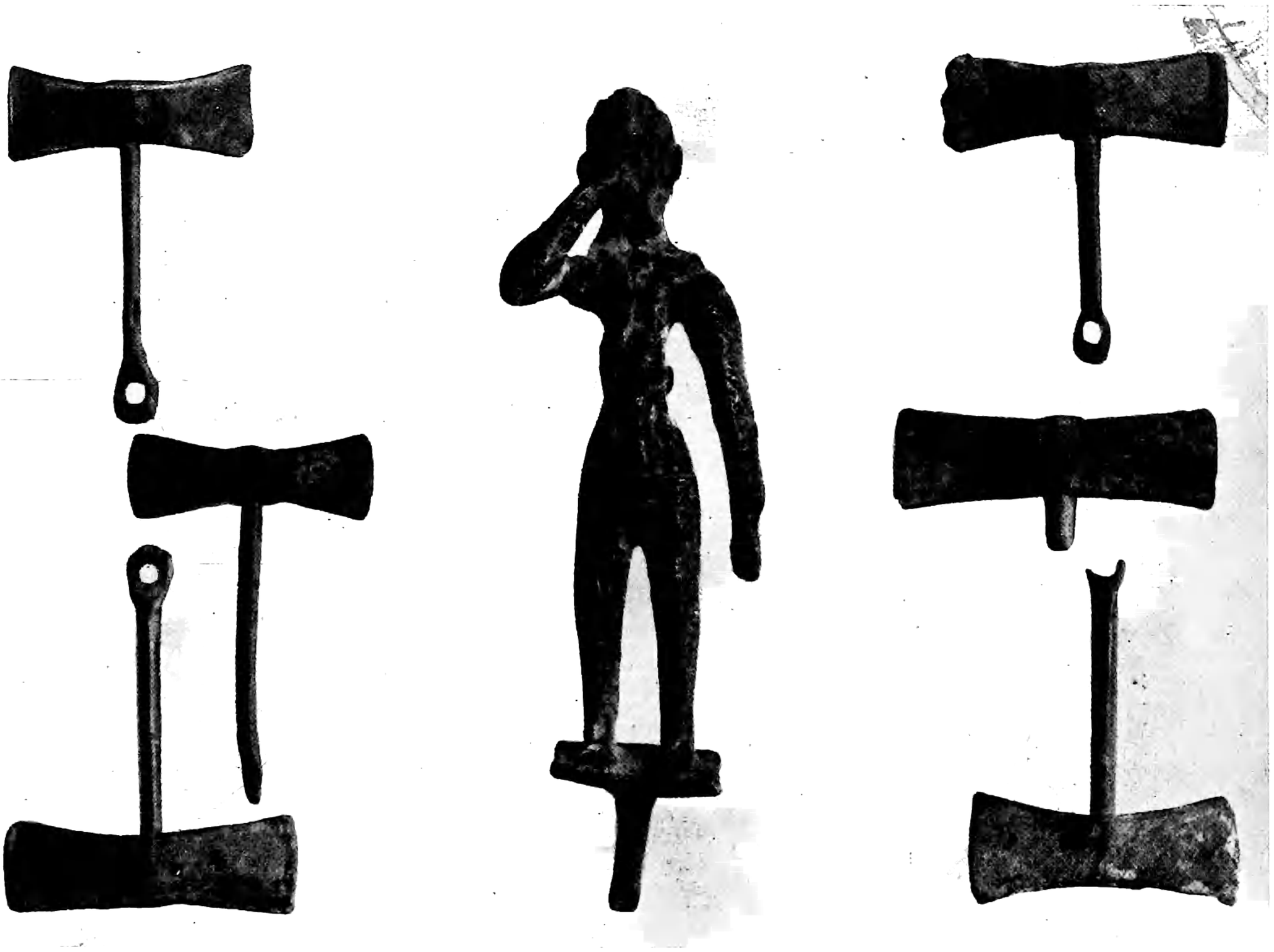


FIG. 153. BRONZE MALE VOTARY AND VOTIVE DOUBLE AXES.

Votive bronzes: male adorant and Double Axes.

The religious import of the deposit is further illustrated by the small bronze figure 9·5 centimetres high, of a male adorant, standing on a base of a usual form (Fig. 153) and six little bronze double-axes, the shafts of which are perforated at their ends for suspension. Once more, the cult of the Snake Goddess is connected, as in the case of the 'snake frames' described above, with that of the sacred weapon.

The little bronze figure belongs to the same approximate date as the statuettes of the Goddess—in other words, to the great transitional Age

[1] Its legs and a small part of its posterior border are broken off. The length of the existing portion is 27 cm. Its height is 24 cm.

that included the close of M.M. III and the very beginning of the First Late Minoan Period.

Date of statuette and associated group M. M. III *b*–L. M. I *a*.

Together with these other objects there was also found a series of lentoid and amygdaloid bead-seals mostly of a roughly executed amuletic class which, as shown by their occurrence in the urn burials of the Sphungaras Cemetery, near Gournià, belong to this same M. M. I *b*–L. M. I *a* phase.[1]

Contemporary faïence figures of Repositories.

The stone statuette of the Snake Goddess above described, as well as the two parallel examples from the same group, is the absolute contemporary of the sister forms in faïence from the 'Temple Repositories' of Knossos. Apart from the general parallelism in style, they represent the same phase in fashions. Certain peculiarities of the corsets and details in the diaper-work patterns seen on the aprons of figures of both groups, as has been already pointed out in the case of the Cambridge figure,[2] are practically identical.

Correspondence in details.

So, too, the manner in which the tail of the snake is coiled round the ears of the Goddess curiously corresponds with the arrangement of those coiled about the head of the larger figure from the Repositories (Fig. 139).

[1] *P. of M.*, i, p. 672 seqq., and, for the chronological evidence of the Sphungaras finds, see Edith H. Hall, *Excavations in Eastern Crete* (Philadelphia, 1912), published by the University Museum. There were, however, some other bead-seals of a definitely Late Minoan class. A pedestalled vessel of limestone, 20·5 cm. in height, also said to have been found with the group, was of L. M. II date. Round its shoulders were four upright handles, apparently in an unfinished condition, with raised coils between and a spiral band decorated its upper rim. A L. M. I *b* jug was also contained in the group. It must be added that so far as I myself was able to judge not a single object in the whole series shown to me and here described presented any evidence of falsification. They were all unquestionably genuine and, with the exceptions mentioned, clearly belonged to the same group.

[2] See above, p. 33.

§ 96. Altars and Ritual of the Knossian Goddess: House and Chapel of the 'High Priest'.

Small Altar block with Sacral Horns and Double Axes in relief; Shafts of Axes added in plaster; Predecessor of Classical Altars; Discovery of Houses South of the 'Caravanserai'; Open stepway; The 'High Priest's House'; Neighbouring paved Minoan Street; Urban region packed with large Mansions—House remains traced under Modern high-road; Paved roadway leading to Temple Tomb; Outer hall of 'High Priest's Chapel' with 'Choir Stalls'; Middle Compartment containing gypsum cists; Chancel and inner shrine or adyton; *Comparisons with 'House of the Chancel Screen' and 'Royal Villa'; Private and Sacrificial entrances to* adyton; *Altar with incurved sides; Drain for escape of blood of sacrifice; Class of Altars or sacral bases with incurved sides; Pyramidal gypsum stand—for base of Double Axe stand; A pair of these set within the* adyton, *beside the Altar; Double Axe bases in West Quarter of Palace; Example from Mycenae.*

Over and above the curious revelations as to the early Snake cult at Knossos described in the preceding Sections, the recent researches on the site have been fertile in results illustrative of the ritual and other arrangements connected with the worship of the Minoan Goddess.

Discovery of Small Limestone Altar with Religious Symbols.

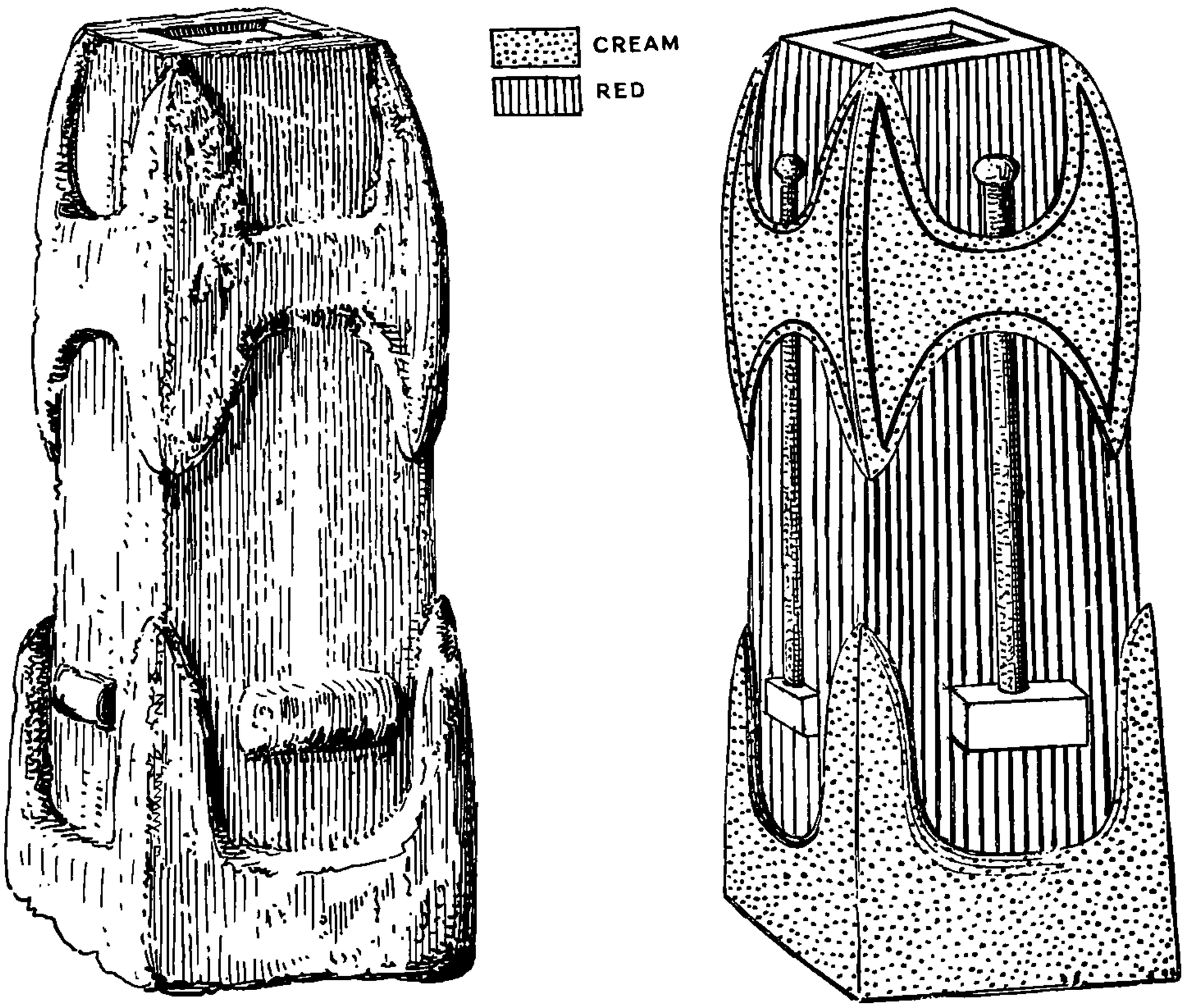
Small altar block with Sacral Horns and Double Axes.

About thirty-three metres North-West from the Palace angle on that side, near the border of the branch of the paved Minoan way that here ascends above the Theatral Area, there was brought out from a superficial deposit, evidently due to drift from the slope above, the small limestone altar block, Fig. 154, presenting on each face reliefs of Double Axes rising from oblong stands, while below, separated from their bases by a small interval, appear the 'Sacral Horns' of Minoan cult. On the summit is a shallow sunken basin, square in shape and flat bottomed.

Shafts of Axes added in plaster.

A remarkable feature with regard to the Double Axes is that the shafts are wanting. That they were originally clearly defined is obvious, and the necessary conclusion is that they were executed in coloured plaster

relief. They rise from square bases. In the restored drawing, Fig. 154, *b*, it is suggested that the axe and shaft, together with 'Horns of Consecration' below, were covered with a creamy white wash, such as is often seen



a *b*

FIG. 154. *a*, SMALL LIMESTONE ALTAR WITH RELIGIOUS SYMBOLS. *b*, RESTORED DRAWING ($\frac{2}{3}$).

on the Palace walls, while the background was painted red. The whole height of the object was only 15 centimetres.

A square altar with 'Horns of Consecration' above it appears among the remains of the Miniature Terra-cotta Shrine of M. M. II date found in the basement of the 'Loom Weights'. Another, on a larger scale, constructed of isodomic masonry, is shown on the steatite relief of the 'rhyton' fragment from Knossos,[1] with the Sacral Horns above its coping. Built altars also reappear on signet-rings with religious types such as the remarkable specimen illustrated below.[2]

[1] *P. of M.*, i, p. 220, Fig. 166, A.

[2] See below, § 115.

Of the parallel class of altar-bases with incurved sides, an interesting example recently brought to light in the 'High Priest's House' at the South of the Palace will receive illustration in the succeeding pages.

Pre-decessor of Classi-cal series.

In no case, however, have we hitherto an example of an altar with the sacred objects in relief on its sides, as here. Such an altar may be regarded as the remote predecessor of a long Classical series on which sacral emblems such as the *bucranium* or ritual vessels are seen in relief. In the reign of Constantine (as is shown by his coinage) the Cross had already begun to supersede these on altar blocks.

The miniature and easily portable cult object here seen—the first of its class yet discovered—is of a kind that might easily have been placed on the floor of one of the small Shrines that we know to have existed in many parts of the building. It may well have belonged to one at or near the North-West Palace angle, from which it seems to have drifted.

The 'High Priest's House'.

An interesting supplement to the discovery of the portable Altar bearing the sacred emblems of the Cult resulted from the further investigations South of the Palace undertaken by me in the Spring of 1931. The primary object of these, the quest—crowned with such dramatic success[1]—for a Royal Tomb, involved, as a parallel operation, the endeavour to trace out the further course of the Great South Road beyond the 'Caravanserai' and the existence of connected structures.

Dis-covery of houses and other remains South of 'Caravan-sarai'. Open Stepway.

A flight of six fine limestone steps, five well-preserved, Suppl. Pl. XLVIII,[2] running up Westwards into the embankment of the recently constructed modern road from Candia on that side, about 320 metres South of the 'Caravanserai', was taken as the starting-point for these explorations. This step-way (Suppl. Pl. XLVII), which, from its limestone material, must have been open to the sky, bordered South of its upper course a large building supported along its Eastern border by massive stone base-blocks and foundations, one block being incised with a deeply cut star sign of an early Middle Minoan character. The continuation of its Eastern wall was struck by means of pits sunk beneath the Western border of the modern road.

[1] For the 'Temple Tomb' see below, § 116.

[2] The steps were 1·40 m. wide, about 50 cm. in tread, and 12 cm. in average height. An upper landing in connexion with them led to a narrower flight leading up under the embankment of the new roadway.

The terminal section of its Northern wall was found by the same means and, a little beyond it, part of the outer wall of what was clearly another large mansion.

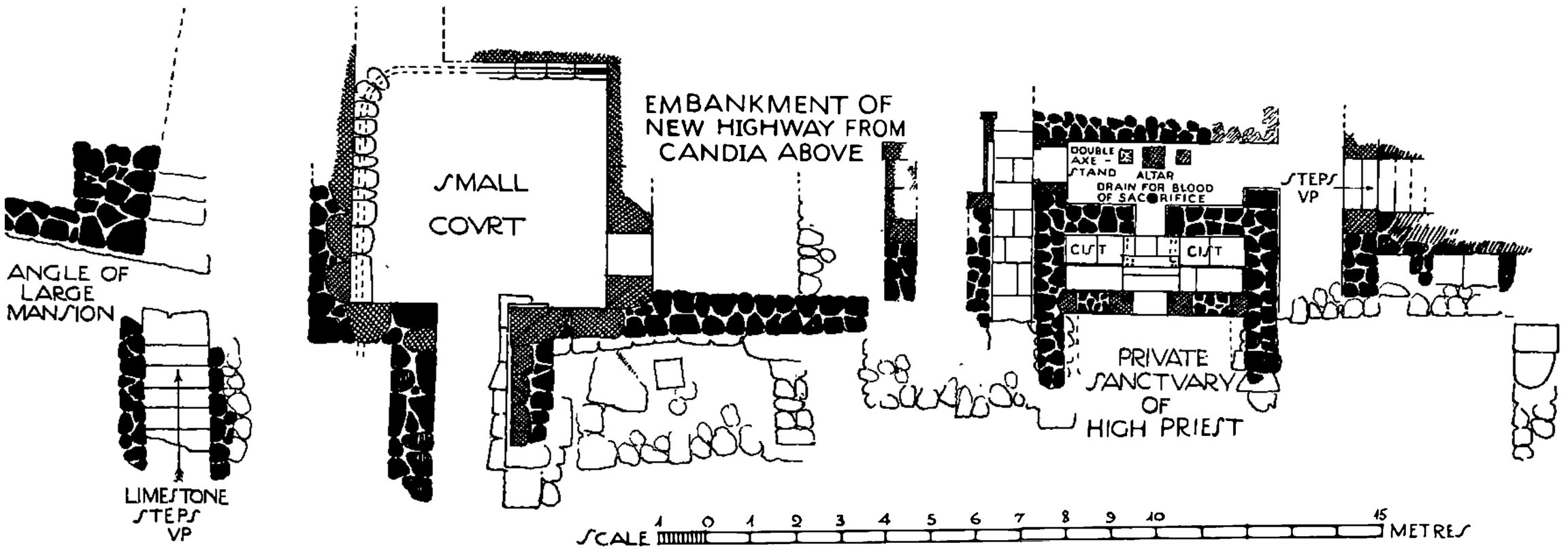


FIG. 155. PLAN OF PRESERVED SECTION OF 'HIGH PRIEST'S HOUSE' AND BORDERING AREA.

House of the Sanctuary: small outer court.

North, again, of the open stairway was a kind of small Court, about $5\frac{1}{2}$ metres square, enclosed by fine walling faced with gypsum blocks and an open gangway giving entrance to it from the East. Against the Southern wall of the yard was a stone bench, and a stone-built drain that had followed two sides of the little Court, after running under this, found its vent through the adjoining wall into what may have been a small tank (see Plan, Fig. 155).

Neighbouring paved Minoan street.

The step-way itself above mentioned pointed towards a Minoan paved way that was here brought to light some six metres below the lowest step preserved, but the remains of an intervening building showed that it could not have reached it by a direct line. The road itself, paved by small irregular blocks, was here confined by buildings on both sides, which may account for its course being exceptionally narrow, only about two and a half metres or some 8 feet 2 inches. It was followed South for some fifty metres, bordered again by a building on its West border and, beyond this, was traced to a point only a few metres distant from its convergence with a more important roadway. The pavement of this, which was 3·52 metres wide, unquestionably formed the continuation of the 'Great South Road' the further approach of which to the Palace is marked by the Viaduct, the piers of which were brought to light below the 'Caravanserai'. Its breadth, in fact, answers to that of its lines

of continuation beyond the bridge over the older course of the Vlychia brook in one direction to the Palace and in the other to the Harbour Town of Knossos.

In its Southward course this important road, immediately beyond its point of junction with the more local line above described, passed close by the North-West corner and entrance of the 'Temple Tomb', being joined just before this point by the special line of access from this to the residence with which we are here concerned.

House remains partially traced out under modern high-road.

Unfortunately, owing to the denudation due to the fall of the ground to the East and to the covering over of the Western part of this building by the embankment of the new road, only an incomplete section of it could be made out, as shown in the Plan, Fig. 155, and that only by means of rather daring tunnelling under the new highway. Both the fine remains of its gypsum façade and the extent covered by the existing structures to the point where they broke off to the North, were sufficient, however, to show that we had to deal with a mansion of exceptional size and importance.

Urban region packed with large mansions.

Special attention must here be called to the fact that in this area between four and five hundred metres South of the Palace, in addition to smaller houses, there were three considerable mansions separated by only a few feet from one another. West of this, where the recently constructed roadway cut into the slope, its construction had, moreover, brought out a continuous series of important house remains to a point opposite the 'Caravanserai'. Here, again, an exploratory trench, dug in 1931, revealed the corner of what, from its exceptionally fine gypsum frontage, must have formed part of another large mansion, unfortunately mostly cut away by the course of the new highway. The evidence already afforded by the group of houses of well-to-do burghers, excavated by Dr. Hogarth in the first year of the excavation, lying on the slope of Gypsàdes from 100 to 150 metres to the North-West and West of this, is thus greatly reinforced, and we may infer that a still more extensive region, on this side was covered with stately mansions.[1]

Throughout all this considerable region, stretching along the lower slopes of the Valley South of the Palace, it may be said, indeed, that wherever the surface of the ground is cut into on any considerable scale, one or more Minoan structures, generally part of imposing private houses,

[1] In my General Plan of the site of Knossos showing the presumed extent of the Minoan Town (*P. of M.*, ii, Pt. II, facing p. 547) the boundary of the 'Inner City' just includes the newly discovered 'High Priest's House'.

are perpetually revealing themselves. At every step the traditional epic description of Knossos as, *par excellence*, the 'great' or 'broad' City[1] receives a fresh corroboration.

The 'High Priest's House' seems approximately to have covered the same period as the later stages of the Palace itself. As noted below, its earliest ceramic relics were of the transitional M. M. III–L. M. I class. An interesting fragment of a spiraliform frieze of painted stucco found near the South-Eastern corner (Fig. 170, p. 220) showed that it had been re-decorated in the mature L.M. I *a* phase, in a style similar to that of the 'Queen's Megaron' and adjoining area.

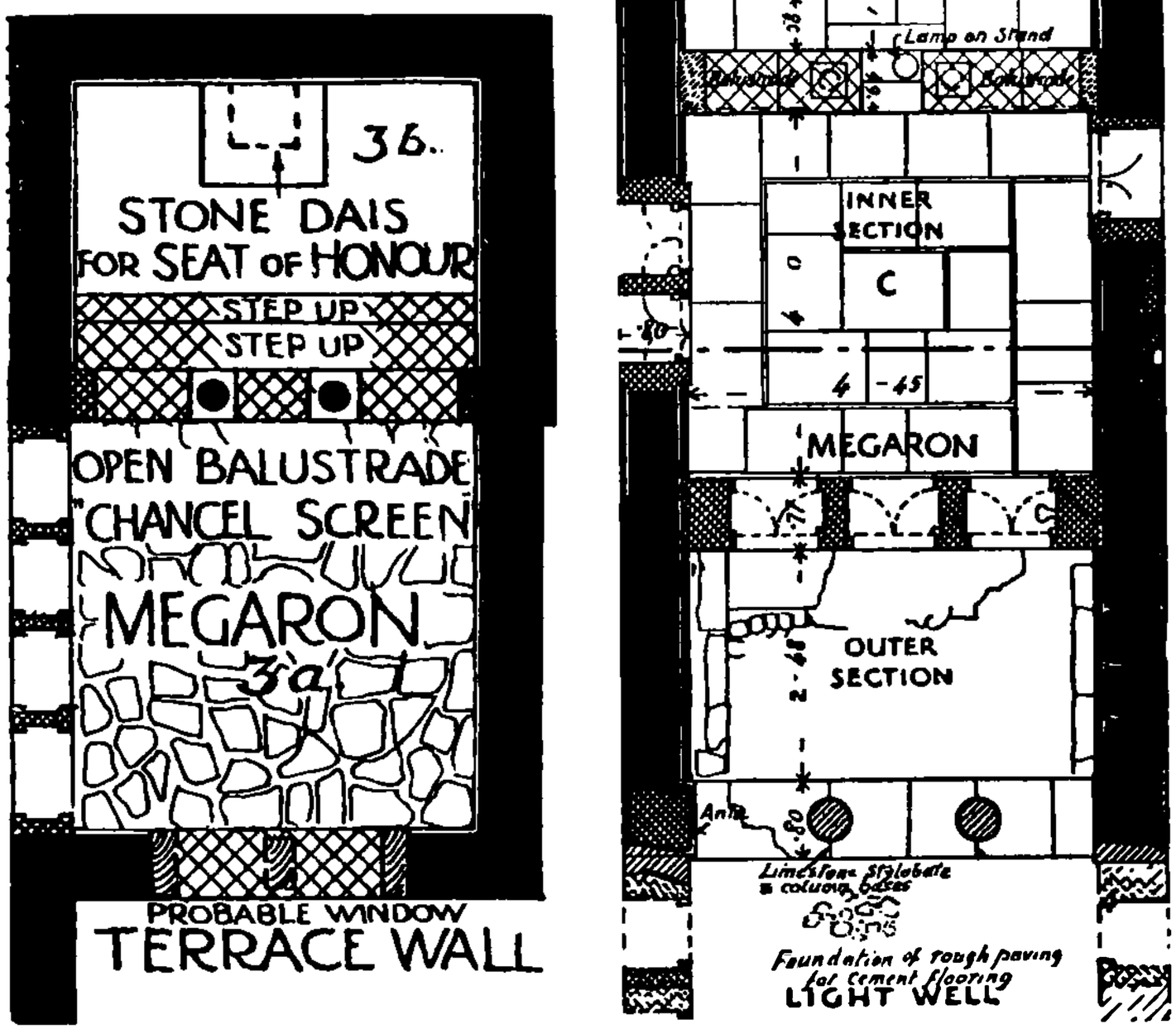


FIG. 156. *a*, PLAN OF MEGARON OF 'HOUSE OF CHANCEL SCREEN' SHOWING DAIS FOR SEAT OF HONOUR; *b*, OF THAT OF THE 'ROYAL VILLA' WITH REMAINS OF GYPSUM THRONE IN NICHE.

Middle Section of 'House of the Sanctuary': Chancel and inner shrine.

The Central part of the Western Section of this house (see Fig. 157 and Plan Fig. 159), so far as it could be uncovered, was by far the most interesting. It proved, indeed, to contain a kind of private shrine or Chapel, the perspective plan of which is given in Mr. de Jong's drawing, Fig. 157.

Comparison with 'H. of Chancel Screen' and 'Royal Villa'.

Elsewhere among the Knossian dwellings we have seen the end of a principal chamber separated from the body of the room by a two-columned balustrade with a central opening and forming a raised dais beyond it. At the back of this compartment, in the case of the 'House of the Chancel Screen', was a raised base, on which it may be supposed the seat of the head of the family was placed (See Plan, Fig. 156, *a*).[2] In the 'Royal Villa', where we see an analogous arrangement, the remains of a

[1] Cf., *ibid.*, p. 559 seqq., § 56 '*The "Broad Knossos" of Homeric Tradition.*'

[2] *P. of M.*, ii, Pt. II, pp. 392–5, and Figs. 224, 225.

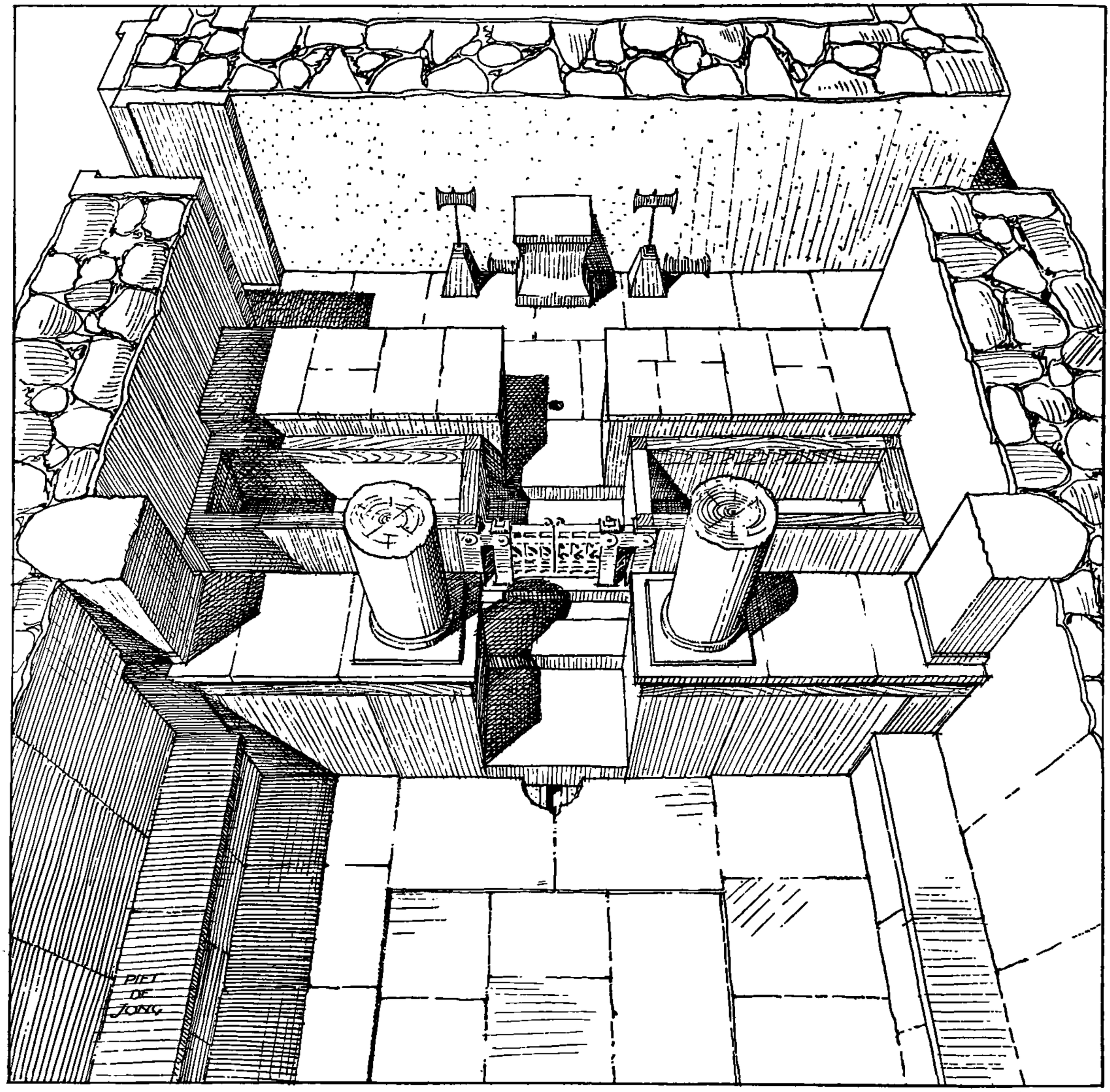


FIG. 157. RESTORED DRAWING OF CHAPEL SHOWING ALTAR IN ORIGINAL POSITION: PIET DE JONG.

gypsum throne or 'seat of honour' were actually found, in this case within a special niche. (See Plan, Fig. 156, *b*.)[1] The screen in these cases, however, is a domestic arrangement.

As will be seen from the Plan, Fig. 159, the Western part of the Chapel has been cut short by the natural denudation of the hill-side. It is a fair conjecture, however, that the original arrangement closely

[1] *P. of M.*, ii, Pt. II, p. 396 seqq., and Figs. 226, 227, 232, 234.

corresponded with that of one or other of the systems represented respectively by the 'House of the Chancel Screen' and the 'Royal Villa'. We must, at any rate, assume that the chamber was lighted at its Eastern end either by means of a window or of a small light-court.

The main hall in this case, however, was distinguished by a feature suggestive—like the *cancelli* formed by the balustrades beyond—of eccles-

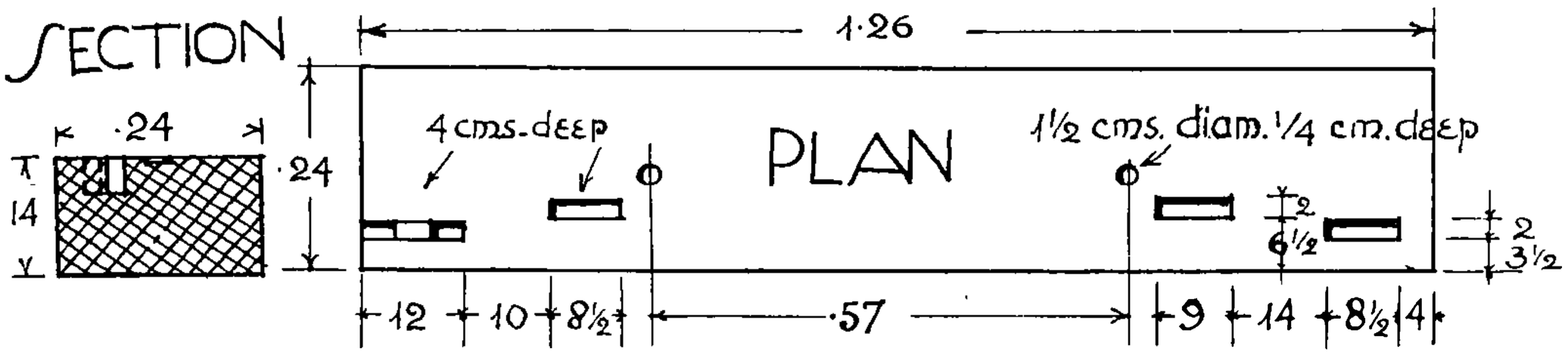


FIG. 158. SOCKETS OF BRONZE DOUBLE GATES ON INNER SANCTUM.

iastical parallels. On both sides were found the solid cores of stone benches—true choir stalls—running along the side walls, and destined doubtless for those who took part as worshippers in the ritual chant led by the priest in the inner chancel.

Intermediate Compartment with Gypsum Cists for Offerings.

Cists for offerings.

The stepped passage between the outer balustrades led to an intermediate compartment marked by two gypsum cists, or open chests, the lower parts of which were visible and which, as the chancel remains showed, had been compacted together by a wooden framework (see perspective drawing Fig. 157). These receptacles may well have been used for the deposit of first-fruits or other food offerings.

Inner Sanctum with Double Gates of Bronze.

Gates of inner sanctum.

These cists were backed against the two inner balustrades that shut off the 'holy of holies', and in the pavement of the stepped opening between them, sockets were visible on both sides (Plan and Section, Fig. 158) that marked the existence of two folding gates, clearly of metal-work, and doubtless formed of bronze. For purposes of illustration these are conjecturally restored by Mr. Piet de Jong in his perspective drawing, Fig. 157; see, too, the photo-type, Suppl. Pl. XLVIII.[1] The side supports of these seem to have been attached to the corner posts of the two cists.

[1] The recess shown at the back of this Suppl. Plate (above the altar and pyramidal bases) is an accident of excavation, and not part of the original plan.

Private access to *adyton*.

Here, again, as is shown by the restored drawing, Fig. 157, the inner section was entered by a passage stepping up between the pillars of the

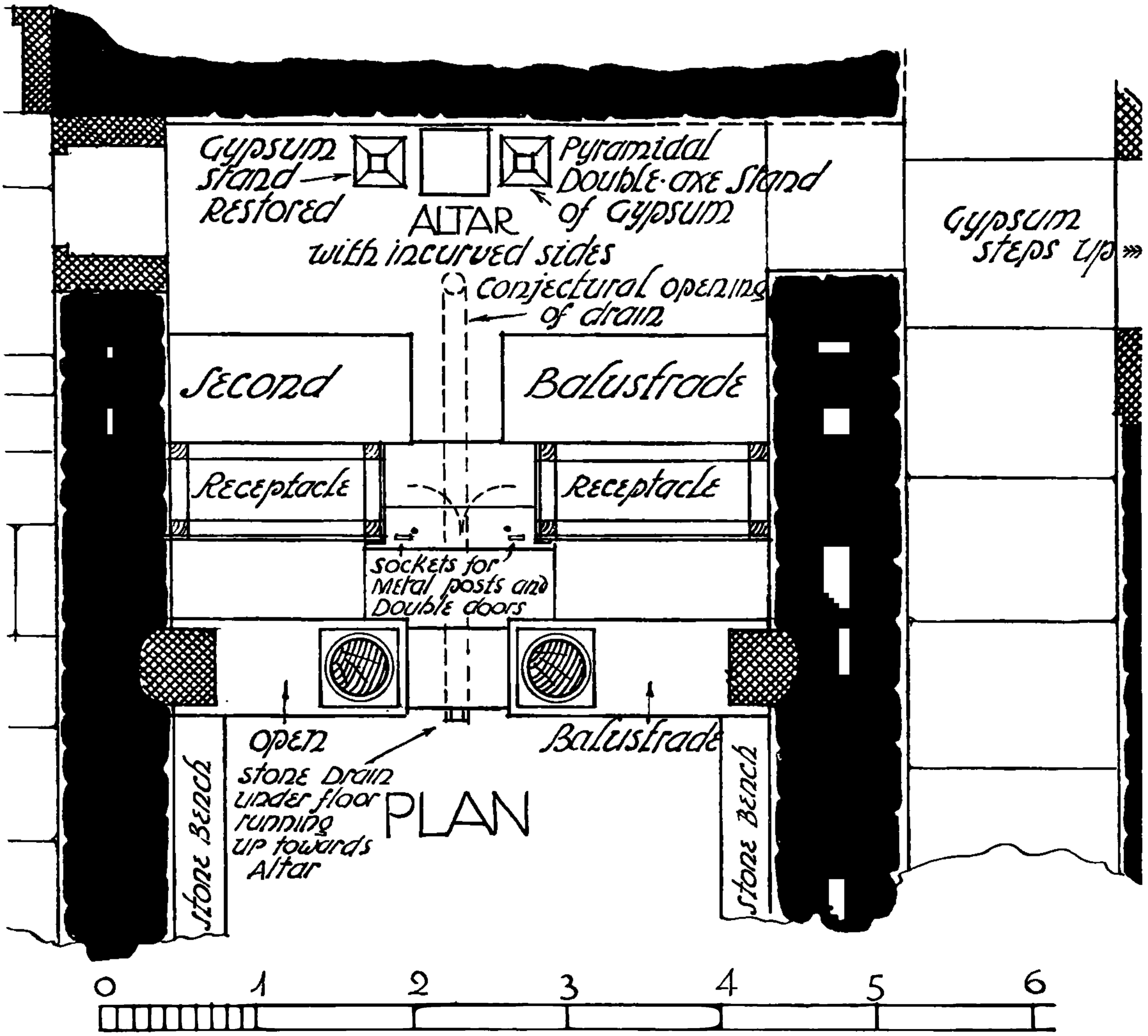


FIG. 159. PLAN OF INNER SECTION OF CHAPEL SHOWING ALTAR IN POSITION (METRE SCALE): PIET DE JONG. SEE, TOO, SUPPL. PL. XLIX.

two outer balustrades. The line of the balustrade-pillars corresponded with the first of the three gypsum steps, leading, in this case, to a second balustrade with a corresponding opening which gave access to the inmost compartment of this curious chamber.

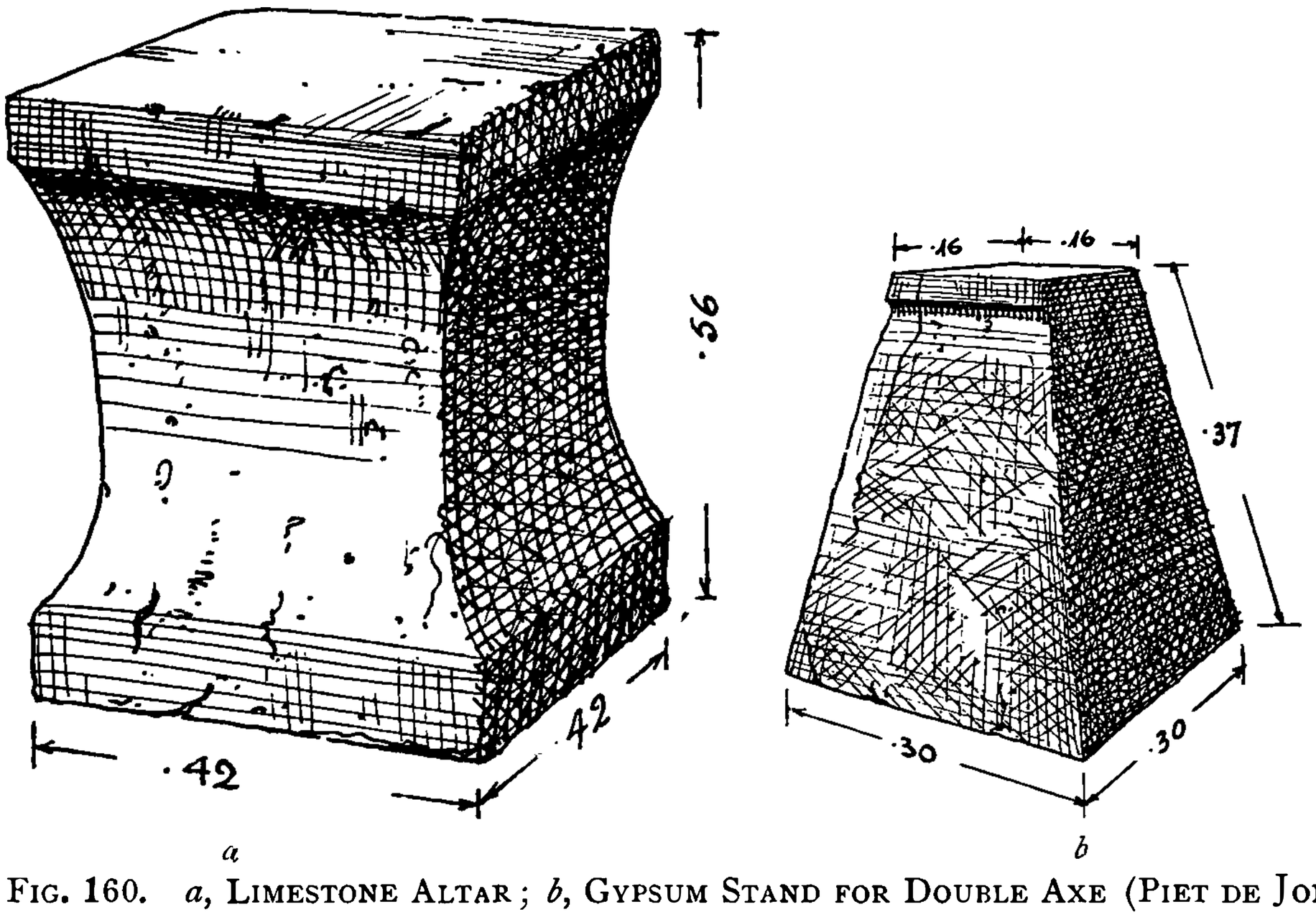
This inner chancel or *adyton* itself consisted of a small elongated chamber 4·80 metres long and 1·50 deep. It was provided with a doorway

with gypsum jambs at its Southern end opening on to a paved passage and running from East to West. By means of this, private access would have been secured to the inner Sanctum for the household priest or other ministrants. At the opposite or Northern end of the *adyton*, however, the approach was open so that sacrificial animals, such as goats or rams, might have been the more easily brought in from the corridor beyond.

Minoan Altar Block and Double Axe Base.

Connected with this reserved compartment was a curious block, which

Altar with incurved sides.



a *b*

FIG. 160. *a*, LIMESTONE ALTAR; *b*, GYPSUM STAND FOR DOUBLE AXE (PIET DE JONG).

though actually found outside the central inner opening, had had, as its flat back shows, its original place close against the back wall. This block is at once recognizable as representing a special class of Minoan altar (Fig. 160, *a*). It is of gypsum, a good deal weathered, so that the profile of the cornice that runs round the front and two sides has lost something of its clear definition. The front and two sides curve in, but the back is flat, and, as noted, had evidently been set against the back wall.

The height of the altar was 34 centimetres, and its square 'coping' was 44 × 44 cm. At its narrowest point its diameter was 29 cm.

From the analogy supplied by the altar with the reliefs of the sacred objects described above, it seems likely that this, too, had originally been embellished with painted decoration. The walls of the *adyton* itself,

in which it stood, had originally been coated with stucco, coloured a Venetian red, of which, however, only scanty remains were brought to light in the small

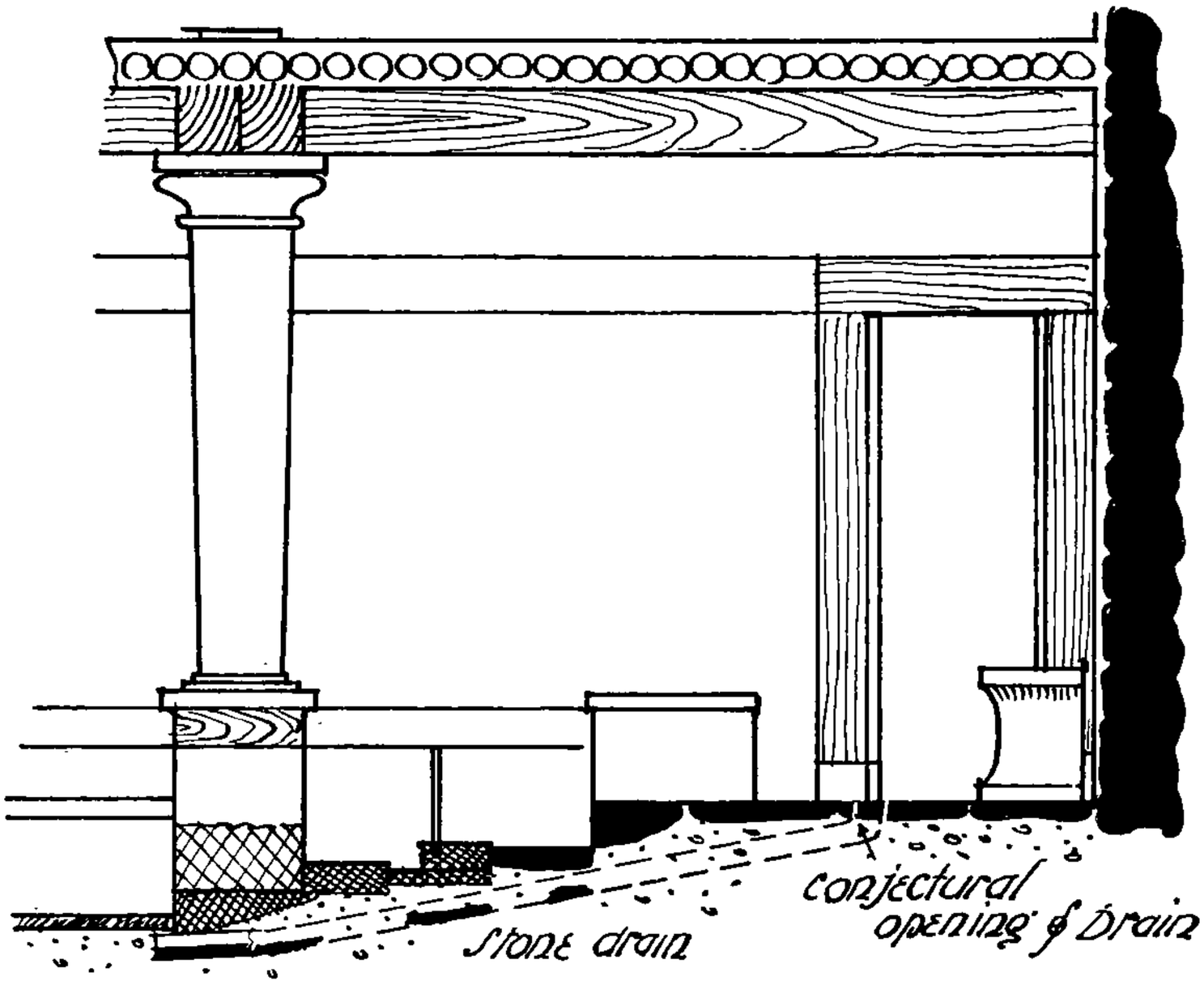


FIG. 161. SECTION OF INNER PART OF CHAPEL SHOWING DRAIN LEADING FROM ALTAR.

section that it was possible to excavate under the new road-way.

Altars or sacral bases with incurved sides.

The altar (Fig. 160), with its curving sides thus brought into prominence, belongs to a well-known class of what in many cases may be rather regarded as sacral bases, such as those beneath the forepart of the lions of the Mycenae gate. The incurving of the sides in this and analogous cases is more pronounced, and bases of this class are adopted as an architectural feature in the façade of one of the faïence 'House-Tablets' and again as a section of the painted frieze on either side of the Throne at Knossos. They seem, indeed, as has already been pointed out,[1] to have played a leading part in the evolution of the 'half-rosette' friezes so characteristic of the Minoan Order.

FIG. 162. INTAGLIO ON LENTOID BEAD-SEAL OF ROCK-CRYSTAL: IDAEAN CAVE.

[1] *P. of M.*, ii, Pt. II, pp. 607, 608; *Note on the relation of half-rosette and triglyph friezes to the incurved type of Minoan altar-base.*

On a crystal intaglio from the Idaean Cave, an illustration of which is here reproduced in Fig. 162,[1] where the Votary summons the divinity by means of a conch-shell trumpet, we see both altar types represented. That to the left with the more gently incurving sides shows above it a conical object, which might be interpreted as a flame of fire. Above the other base with the C-like curves the 'Horns of Consecration' appear—as if set in another plane—in front of a group of three trees.[2] A five-rayed star to the right of the last-mentioned altar adds a further religious element to the scene.

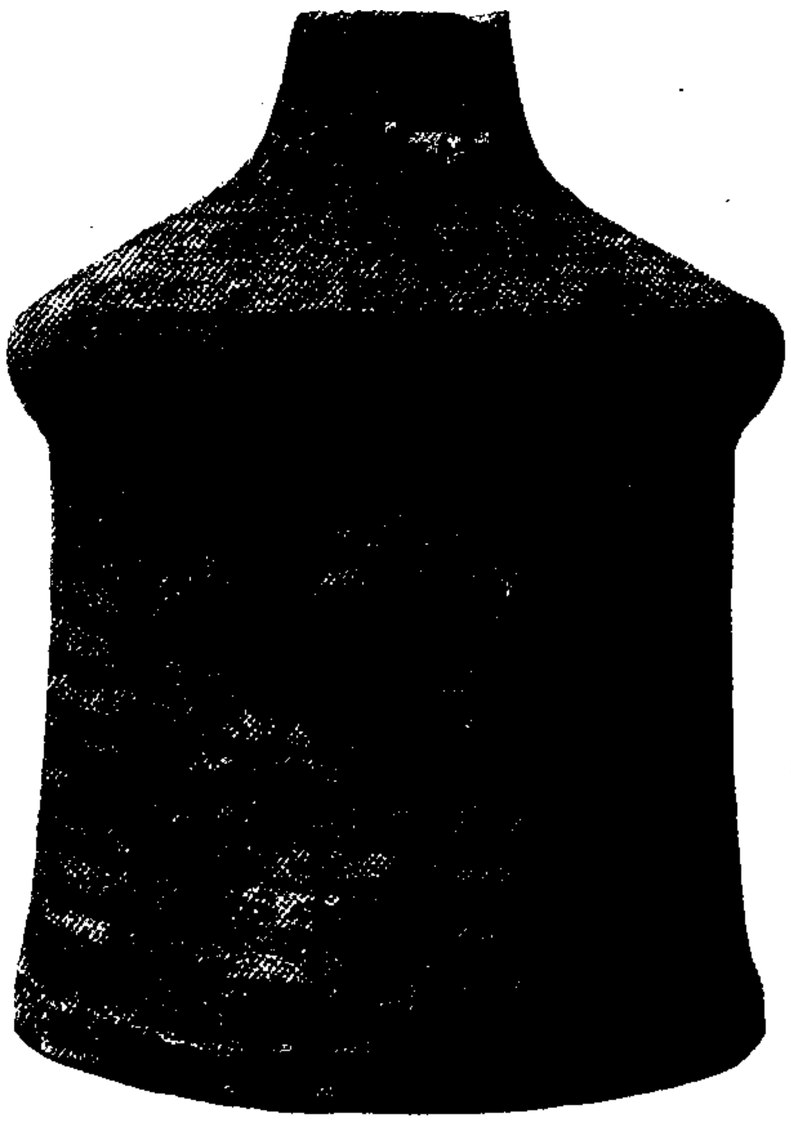


FIG. 163. CLAY VESSEL FOUND NORTH OF ALTAR. ($\frac{2}{3}$)

Drain for the Blood of Sacrifices.

The ascending course of a stone drain, intended to carry off the blood of sacrifices, was traced beneath the central step-way leading in a direct line to the altar. Its opening, which would have been about six feet in front of the block, had been destroyed, but its further course below was visible beneath the pavement of the outer hall of the Chapel. (See Fig. 157 and Suppl. Pl. XLIX.)

This arrangement certainly suggests that the altar was in this case used for 'bloody sacrifice', the victims—which must have been small animals—having been led in, as already inferred, through the open passage to the *adyton* at its North end, or, alternatively, the blood, already shed, being brought in in pails and poured before the altar and between the Double Axes, as shown on the Hagia Triada sarcophagus.

A remarkable clay vessel of cylindrical shape below, showing black striations, found North of the altar, may have had some ritual use, perhaps for oil of anointing. The neck, which was handle-less, is broken off above, the height of the vessel in its existing state being 15 centimetres (Fig. 163).

Pyramidal Pedestal of Gypsum; compared with Double-Axe Stands.

Pyramidal gypsum pedestal.

In juxtaposition with the altar block, there came to light a curious gypsum pedestal, one side of which was broken away, but which originally

[1] See *P. of M.*, i, p. 222, Fig. 167.

[2] Cf. A. E., *Myc. Tree and Pillar Cult*, p. 44, Fig. 25.

was of pyramidal shape, 37 centimetres in height. It had a square base and four sides tapering upwards to a square-cut upper surface 16 by 16 centimetres in dimensions (Fig. 160 *b*). The whole was evidently used as a support for some object of cult.

There can hardly be a doubt that this gypsum pedestal was, in fact, designed as a base for the stand of a Double Axe of moderate size. The pyramidal form of the object itself suggests a comparison with that of a well-known class of Double-Axe stands wrought out of gypsum, limestone or steatite, and, though these as a rule were slightly stepped, this was not by any means universally the case.[1]

Some of the steatite axe stands of this class are quite small and portable and might well have been placed on a pyramidal pedestal such as that before us. One in this material from Palaikastro had a base only 11·5 centimetres square, the whole being 9 cm. high.[2] That found in association with a bronze Double Axe of the ritual kind in the Psychro Cave and the fragmentary specimen, also of dark steatite, brought to light in company with the bull's head 'rhyton' in the same material in the Little Palace, would have been equally adapted for such a position.

Conclusion that a pair of pedestals for Double Axes was set beside Altar.

It may also be observed that such a method of placing a small Axe, stand and all on a more or less fixed pedestal, would have a certain convenience since the shafts of these sacred weapons were carefully locked into their sockets. This was effected by means of a small pin inserted through a hole in the side of the apex of the pyramid, as is well illustrated by the specimen referred to from Palaikastro. The horns of bull's head 'rhytons' were fastened on in the same way, and the same method is adopted for the primitive locks of Minoan doorways, the bronze 'locking-pins'—or primitive keys—of which specimens have been found.[3]

This pyramidal base—like several Double-Axe stands found in position beside the sacred pillars in Crypts[4]—would have been in the position in which it is restored, beside the altar. Considering the frequency, moreover, in which Double Axes appear in pairs and the symmetrical arrangement

[1] That found in position before the pillar in the South-East House at Knossos (which has a Double Axe incised on it) is a truncated cone without steps. It has a small socket without any signs of 'locking'.

[2] R. C. Bosanquet, *Excavations at Palaikastro* (*B. S. A.*, viii), p. 300.

[3] See *P. of M.*, ii, Pt. II, p. 527 seqq., and Figs. 332 and 335. *Ibid.*, ii, Pt. I, p. 384, Figs. 217, 218, and iii, pp. 12–14. For a 'locking-pin', see p. 12, Fig. 6. The gypsum door-jambs of the Pillar Crypt of the 'Temple Tomb' described below (§ 117) showed similar borings for this primitive form of lock.

[4] As, for instance, in the Pillar Crypts of the South House and South-East House at Knossos.

prevailing in the sanctuary, we may with great probability infer that a similar pyramidal base had been placed on the other side of the altar. In the restored drawing, Fig. 157, this balanced arrangement is adopted.

Pyramidal bases of Double Axes in West Quarter of Palace.

Throughout the whole Western region of the Palace there were found fallen into the deposits found in the Magazines and basement passages a series of stepped pyramidal sockets—of limestone, or gypsum, originally plastered over—such, as we know from the sacrificial scene on the Hagia Triada sarcophagus, served as stands for the sacred weapon.[1] It is fairly certain that these had made their way into the basements from small shrines and sanctuary halls on the upper floors.

Double-Axe base at Mycenae.

Together with all the other details of the Double-Axe Cult, the use of these pyramidal bases was carried by the Minoan Conquerors to Mainland Greece, and a specimen, much worn, was discovered by the British excavators on the ramp of the Akropolis at Mycenae.[2]

The 'High Priest's House'.

Ceramic evidence of L. M. I *a* date.

From the ceramic contents of this House,[3] though much broken and scattered by later disturbance of its rooms and passages, its construction in its present form must be assigned to the great epoch of Restoration that succeeded the seismic catastrophe that took place towards the end of the Third Middle Minoan Period. It thus repeats the history of the 'South House', of that of the 'Chancel Screen', of the 'Royal Villa', and of 'the Little Palace'.

In this case, however, though there was a considerable series of fragments illustrative of the L. M. III *a* epoch immediately following the final catastrophe of the Great Palace, typical sherds belonging to the Age of 'Squatters' were almost wholly absent. The same, as we shall see, was the case with the 'Temple Tomb', the history of which indeed shows a great correspondence with that of this priestly residence. The finest ceramic relic found in this house was a two-handled ewer, shown, with the upper part restored, in Fig. 165. It is of exceptional form, with a prominent ring round

[1] Examples are carefully collected by Nilsson, *The Minoan-Mycenaean Religion*, p. 182 seqq. On the little altar, Fig. 154, the Double Axes rise from square-cut bases.

[2] Published by Nilsson, *op. cit.*, p. 184 and note 1 from a photograph supplied, with Mr. Wace's permission, by Dr. Boethius. He there mentions that an account of the discovery was to be published by the British excavators in their Report on the Kalkani Cemetery, explored in 1922, and which has now appeared in *Archaeologia*, vol. lxxxii.

[3] The earliest group of sherds found here is of the mature L. M. I *a* class (reed pattern, &c.).

the base of its neck and double excrescences below the spring of its handles. On the front of the neck is a whorl-shell and sea-tang in the marine style of L. M. I *b*, and the lower part of its body is covered with fine stippling. The upper part of a very decorative 'Stirrup Vase' presenting an 8-shaped shield in relief is illustrated below in connexion with a globular vessel in the same general style dating from the latest L. M. II phase, found with the secondary interment of the inner Chamber of the Temple-Tomb.[1]

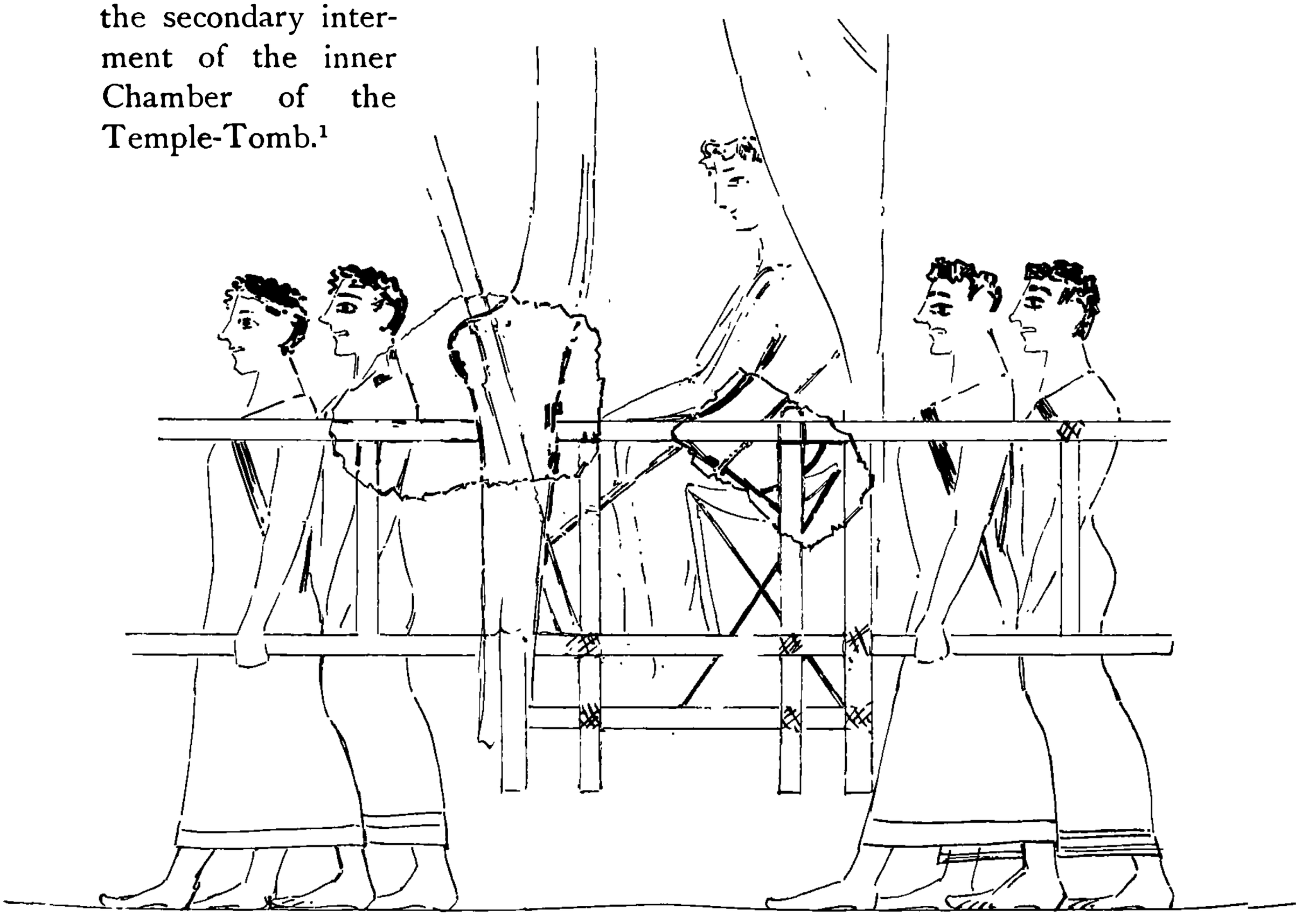


FIG. 164. PRIEST BORNE BY ACOLYTES IN PALANQUIN. RESTORED FROM FRESCO REMAINS OFF SOUTH-NORTH CORRIDOR BY E. GILLIÉRON, FILS.

From the very pronounced religious character of the principal chamber we may reasonably conclude that it had been designed for the habitation of some sacerdotal functionary. As to the function that he fulfilled we gain a real clue from the paved street that led almost in a direct line from the South-East corner of the mansion to the remarkable Temple-Tomb of a Knossian Priest-king, not two minutes' walk to the South of it.

[1] See below, § 117.

The Priest who occupied this sanctuary dwelling was surely the Warden of the 'Holy Sepulchre' of Minoan Priest-kings.

The fresco remains, indeed, brought to light in connexion with the corridor above the South Porch of the Palace help us to supply the vision of the high-priest himself borne in his *sedia gestatoria*—recalling that of the *Papa-Rè* to-day—to the sepulchral sanctuary placed in his charge. The priestly functionary there seen (Fig. 164)[1] is seated in his folding-chair, borne on a palanquin by four acolytes, each robed—as he seems to have been himself—in a long white winding vestment bordered by a transverse saffron band.[2]

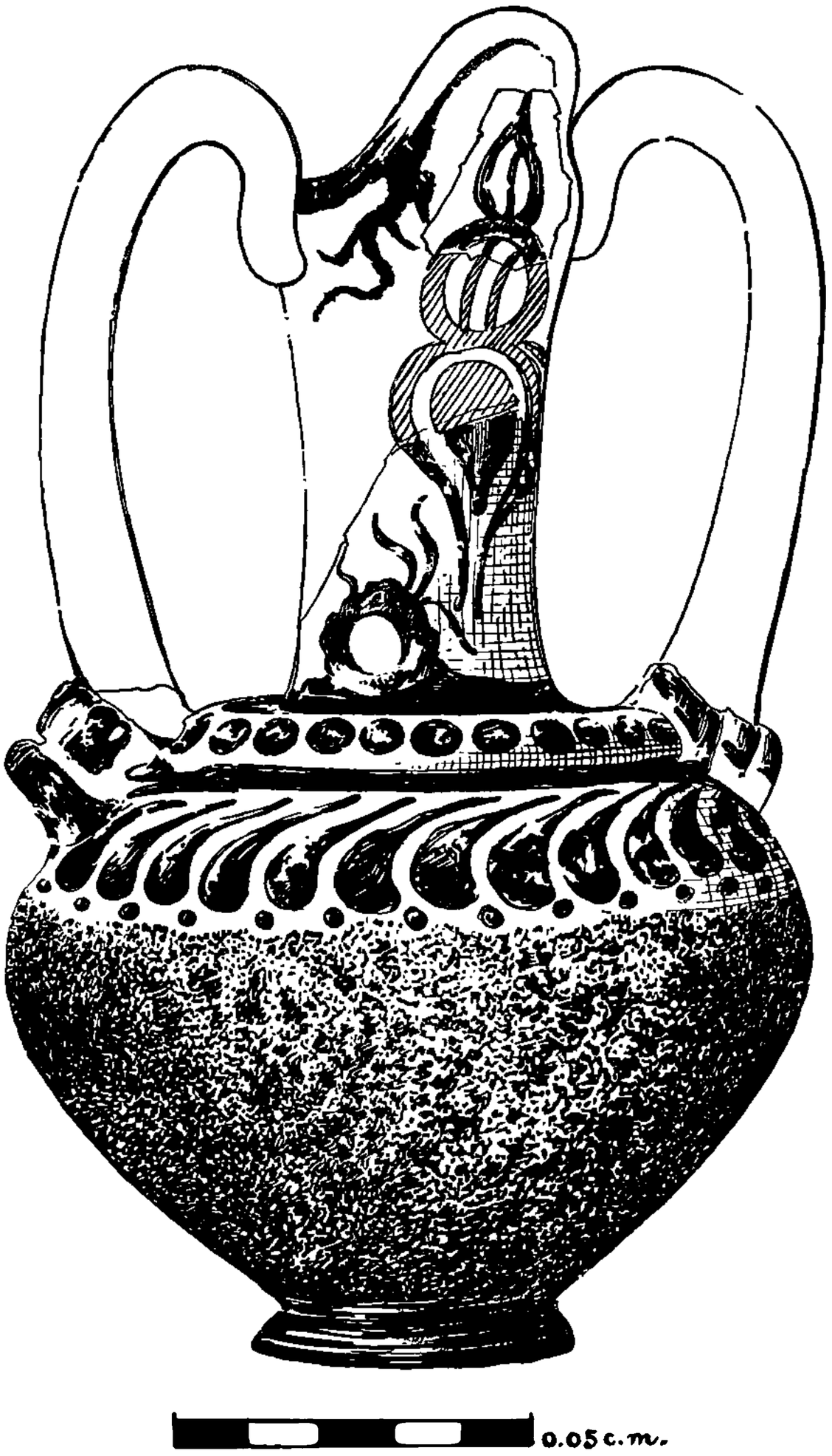


FIG. 165. EWER IN 'MARINE' STYLE (L. M. I *b*). 'HOUSE OF SANCTUARY.'

Work of Conservation and Reconstitution in 'Little Palace'.

Works of conservation in 'Little Palace'

Among the other structures hitherto excavated on the site of Knossos outside the great building, the 'Little Palace'—connected with it by what may be regarded as a very ancient *Via Sacra*—also, as already pointed out,[3] presents an example of a building which, though in part no doubt residential, was principally dedicated to religious purposes.

'Little Palace' a Religious Foundation.

With its exceptionally sumptuous Lustral Area—used by the later squatters as a 'Fetish Shrine'—its succession of Pillar Crypts, and the great artistic value of its ritual vessels, if we may judge from the exquisitely

[1] Reproduced from *P. of M.*, ii, Pt. II, p. 772, Fig. 503.

[2] For representations of Priests on gems see Part II, § 101.

[3] See *P. of M.*, ii, Pt. II, p. 771.

fashioned bull's head 'rhyton', it presents every appearance of a religious foundation. These features stand, indeed, in a close connexion with the Cult of the Minoan Goddess in her chthonic aspect. Built, indeed, in that tragic epoch after the practical closure of a whole phase of Minoan culture by a great Earthquake, the relation of these structures to her as Lady of the Underworld has a special significance. The spacious pillar crypts—well provided with stone vats for the blood of victims, together with the columnar halls for more public worship that overlay them, were, in fact, so many Expiatory Chapels.

Princely reception suite.

The entire South-East area of the building was occupied by these, and—facing the upper story of the sanctuary thus composed—was a splendid series of halls and porticoes designed for public functions and princely state.

One of the most urgent tasks imposed on me during the season's work of 1931 had been to rescue from the advancing stage of decomposition into which it had fallen the noble reception suite that stretches along the whole of the East front of the building—which, with its Entrance Hall, Peristyle, and Great Megaron beyond, bordered by its outer colonnade, forms, in fact, the finest architectural suite known to us from the Minoan World. (See Fig. 166, and Suppl. Plate L.)

Grand Staircase reconstituted.

With this was integrally connected the reconstitution of the adjoining first and second flights of the grand staircase, all the elements of which remained, though in a collapsed state.

This latter work, well executed like the other by the native mason, George Spourdalakis, under the able direction of the Architect of the British School, Mr. Piet de Jong, fortunately resulted in the incidental discovery of a small relic that throws an interesting side-light on another aspect of the local religion.

Bead-seal with Head of 'Dervish' Priest apparently leading Orgiastic Dance, found in 'Little Palace'.

Discovery of bead-seal with head of 'dervish' priest

Beneath the slab of the fourth step of the lower flight of stairs, the fractured pieces of which had to be raised in order to re-cement them, was found a lentoid bead-seal of black steatite (Fig. 167). From the associations in which it was found this relic may be assigned to the transitional M. M. III–L. M. I epoch.

One side of the lentoid (*a*) shows the head of a bull, partly worn away, but executed in the finest style of Minoan engraving. On the other side (*b*), deeply incised and well-preserved, is what at first sight might be regarded

FIG. 166. RESTORED EAST SECTION OF 'LITTLE PALACE' SEEN FROM ABOVE S.E. PILLAR BASEMENT. IT SHOWS THE GRAND STAIRCASE TO LEFT, AND TO RIGHT OF THIS A VESTIBULE STEPPING UP TO A PERISTYLE WITH EIGHT COLUMN-BASES AND THE MEGARON BEYOND, IN TWO COMPARTMENTS. THE LUSTRAL AREA TO THE LEFT OF THIS IS ROOFED OVER.

as the caricature of a head of a bearded man. His hair, abnormally short for a Minoan man, is slightly coiled at its end, his nose is somewhat snub, he has a heavy jaw and strong sinews to his neck, his mouth is open as if he were raising his voice and he wears a slightly pointed beard. That this is not intended for a caricature in any sense of the word, but in fact represents a definite class of personage, can hardly be doubted when it is compared with the head of the elderly sistrum player[1] on the 'Harvester's' Vase from Hagia Triada. In this most spirited of all Minoan compositions —a section of which is given in Fig. 169[2]—he is seen chanting open-mouthed at the head of the revel rout, immediately followed by three younger members of his special choir, singing the same refrain.

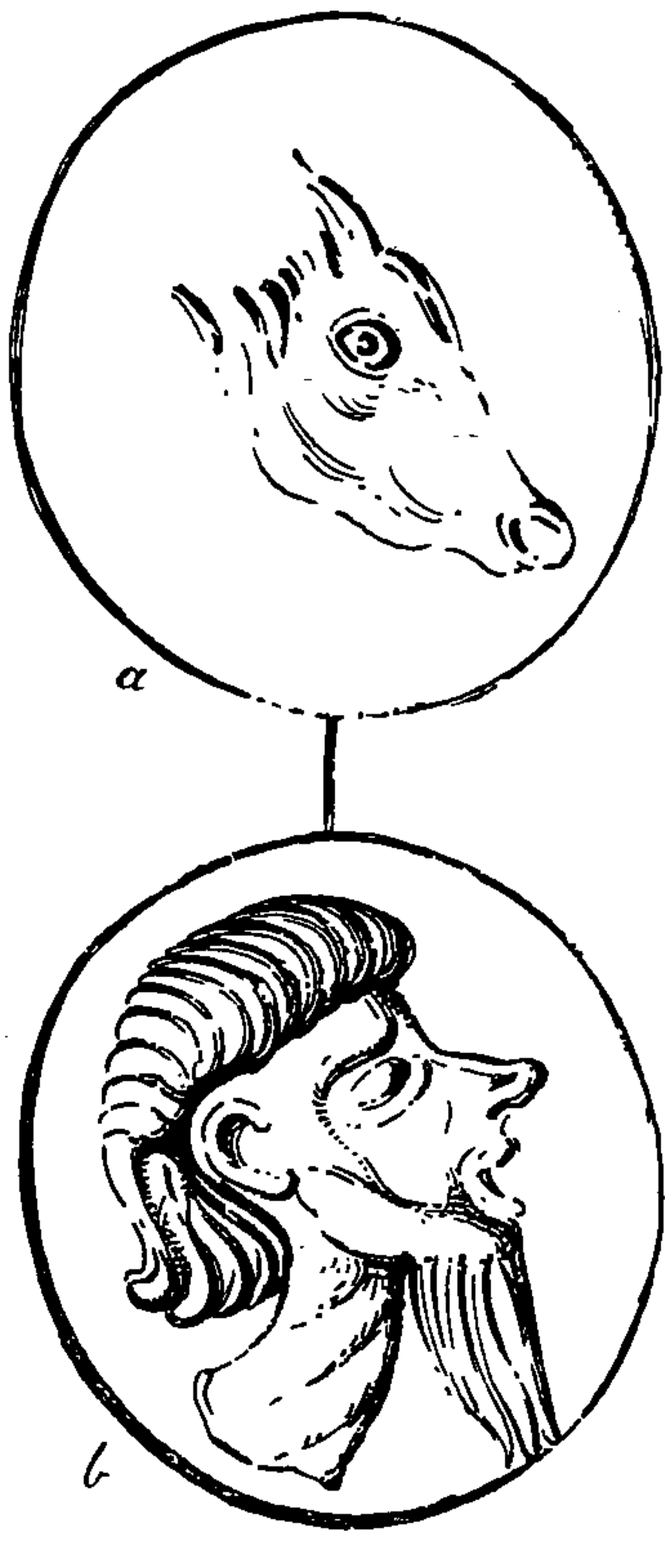


FIG. 167 *a*, *b*. TWO SIDES OF BLACK STEATITE BEAD-SEAL FROM 'LITTLE PALACE': *a*, HEAD OF BULL (ABEADED); *b*, HEAD OF CHANTING PRIEST AS IF LEADING ORGIASTIC DANCE ($\frac{3}{1}$).

FIG. 168. SISTRUM-PLAYER LEADING REVEL ROUT ON 'HARVESTER'S' VASE, HAGIA TRIADA ($\frac{3}{1}$).

Compared with sistrum-player of Harvester's 'rhyton'.

Drawings of both heads are given in Fig. 167, *b*, and Fig. 168, and it will be seen that the profile of both presents a distinct resemblance. The 'sistrum' player also has a markedly heavy jowl, and his neck shows the same triple sinews. The most obvious distinction is that the head upon the

[1] Repeated from *P. of M.*, ii, Pt. I, p. 47, Fig. 22 *b*.

[2] The broad belt of this figure is a mark of an advanced age. See *P. of M.*, iii, pp. 449, 450.

intaglio is provided with a beard or 'goatee', which is of a quite exceptional appearance among advanced Minoan representations.[1] The counterpart to the *sistrum*-player, however, the rustic 'Coryphaeus' who sings open-mouth in the processional scene, also wears a beard. It seems, moreover, to have been a usual feature of the earlier stone images—including one found on the site of Knossos itself[2]—of the 'proto-Libyan' class, where indeed it must be regarded as the reflection of a Libyan fashion. In the case of the member of a priestly caste the survival of this archaic usage need excite no surprise. It is, indeed, of a piece with the occurrence of a stone libation table of early Nilotic type in the 'Temple Tomb'.

FIG. 169. SECTION OF RELIEFS ON STEATITE RHYTON, HAGIA TRIADA.

Judging by the group on the 'rhyton' we may recognize here, under a characteristic aspect, the head of a 'dervish' band such as may have celebrated the more orgiastic side of the Minoan cult in relation to the 'harvest home' festivals. The musical instrument used by the leader of the rout on the 'rhyton' is a *sistrum* of the simpler and more archaic Egyptian class. This type also occurs as a character of the Linear Class A and appears on a large tablet from Tylissos[3] in company with the *ankh* sign, which also had a religious currency in the Minoan world.

Orgiastic side of Minoan Cult.

This portrait of a 'dervish' priest, with the neck bent forward as if hurrying forward, like the 'sistrum'-player at the head of the harvest rout, supplies a fresh link with an orgiastic side of the cult, upon which the association of the Minoan Goddess with the cymbals of Kybelê on the Thisbê ring has already thrown some light.[4] The *sistrum*-player himself is surely the fellow of the 'Cymbal-player', whose mortal remains, together

[1] Among rare instances of its occurrence in the transitional M. M. III–L. M. I epoch may be mentioned the fragment of a steatite 'rhyton' from Knossos with the relief of an archer.

[2] *P. of M.*, ii, Pt. I, p. 31, Fig. 13, *b* 1, *b* 2 (and cf. *c*). The beard of the shell head from Mesarà (*ibid.*, p. 46, Fig. 21, *a*, *b*) is of a more stubbly kind.

[3] See my copy in I. Hatzidaki, Τύλισος Μινοική, p. 213, Fig. 19 A'.

[4] *P. of M.*, iii, pp. 470–4, and Fig. 328 (p. 471).

with his instruments, were found in a very late Minoan tomb in East Crete.[1]

This orgiastic aspect of the old Cretan worship[2] is, in fact, well represented in the *Kouretes* of its later phase, who danced around the infant Zeus. According to the Eteocretan tradition preserved by Diodorus, they were half savage in their habits of life, dwelling in caves and thickets on the mountains[3]—something akin to the Selloi of Dodona. It is in the train of Rhea-Kybelê, on the Phrygian side, however, that we find the best survival of this aspect of the cult. The mendicant priests or Mêtragyrts of the Great Mother—amongst whom, it may be remembered, the Second Dionysios of Syracuse enrolled himself in his old age[4]—may well have recalled the physiognomy of the head on this Knossian intaglio.

[1] At Moulianà in Siteia; Ἐφ. Ἀρχ., 1904, pp. 46–8, and Fig. 11.

[2] On traces of an orgiastic cult in Crete see especially M. Nilsson, *The Minoan-Mycenaean Religion*, p. 506 seqq.

[3] Diod. V. c. lxv, i.

[4] Klearchos in Athenaeus, xii, 58.

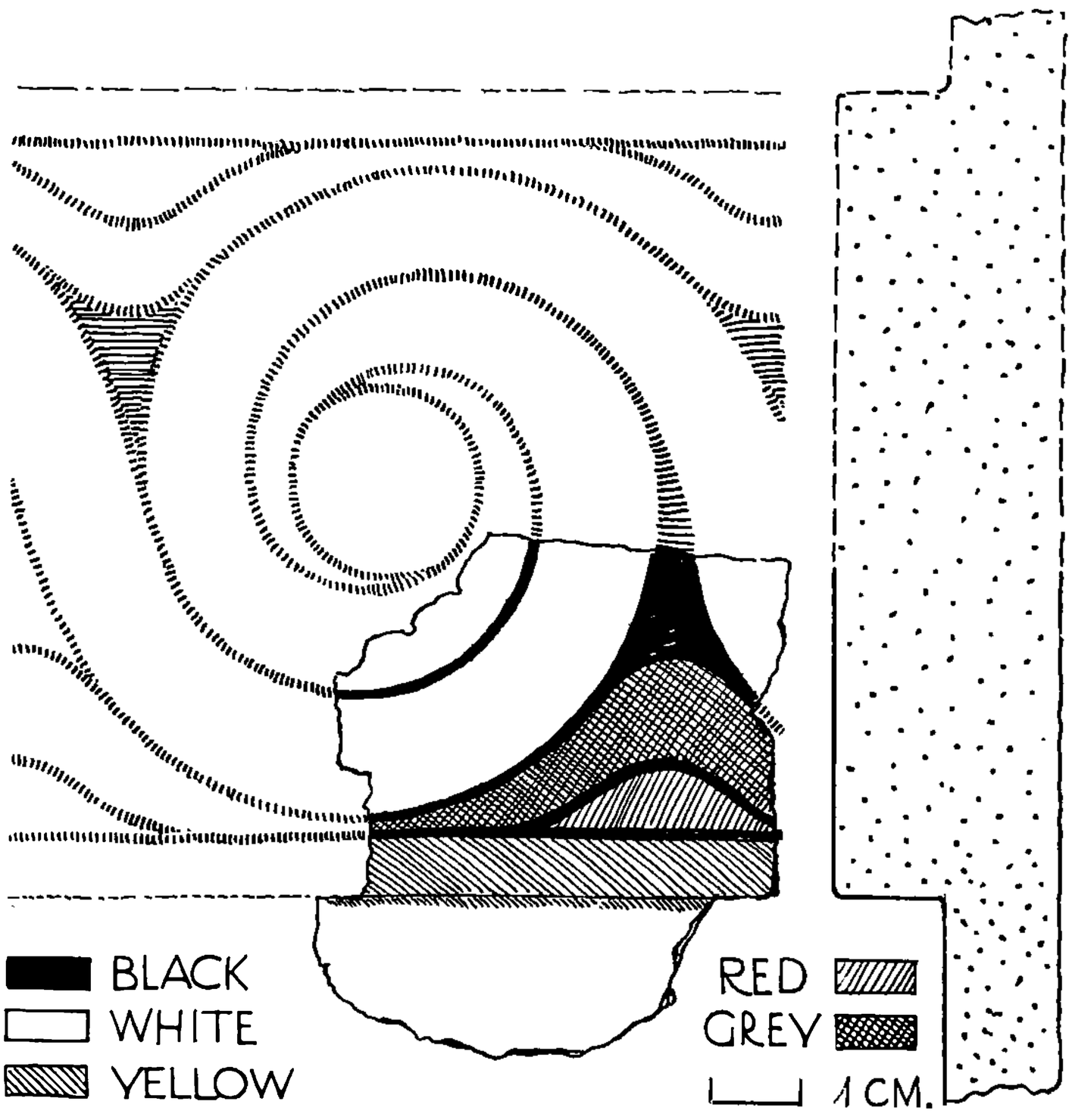


FIG. 170. FRAGMENT OF PAINTED STUCCO FRIEZE FROM 'HIGH PRIEST'S HOUSE' (SEE P. 205).

§ 97. Architectural Friezes and other Reliefs from the 'Middle Palace' at Knossos and the 'Riddle of Mycenae'.

Discovery of fresh Section of 'triglyph' and half-rosette relief band—identical with frieze from Atreus Tomb at Mycenae; Similar friezes at Knossos on M. M. III a *frescoes; Contemporary rosette reliefs there; 'Triglyph' and 'half-rosette' frieze of N. W. Entrance—a M. M. III–L. M. I feature. Absence of later examples at Knossos; Later painted frieze in Megaron Porch, Mycenae; Alabaster frieze of Tiryns—an outgrowth of Knossian type; Fragment of gypsum Capital from 'Clytemnestra' façade—its spiral and plaitwork decoration typical of M. M. III* a*; Steatite Medallion* pithoi *found in 'Clytemnestra' Tomb, resembling those of Royal Magazines at Knossos; Fragment of limestone* pithos *from West Magazine, Knossos; M. M. III* a *stone vases with plaitwork and inlays from 'Clytemnestra' Tomb; Fragment of Cretan breccia 'rhyton' from 'Atreus'* dromos, *in form of bull's head; Sculptured details of the two great* Tholoi *as well as interior relics connected with M. M. III Palace at Knossos; Impossible theory of Earlier 'Shaft Grave' and later '*Tholos*' Dynasty at Mycenae. Transference of burials for safety's sake from Bee-hive Tombs to Shaft Graves within walls natural explanation; Different character of VIth Grave—always* in situ; *Incongruity of attribution of 'Atreus' tomb to Age of Mycenaean decadence. New materials in support of 'Transference' view. Contents of Shaft Graves synchronize with relics found in the two Great* Tholoi. *Embossed gold plates found in* Tholoi *like those in Shaft Graves. Latest of the continuous ceramic series in* Tholoi *as in Shaft Graves, L. M. I* b*; Later occupation of* Tholoi *in L. M. III* b*;* Stelae *originally placed under vaults as well as in the open; In rock tombs at Mycenae; In Dendrà Cenotaph and* Tholos *near Heraeon;* Stela *in Knossian Chamber Tomb; Reliefs on Mycenae* stelae *of Knossian lapidary School; Minoan seal-types taken over onto* stelae*: Connexions with XIIth Dynasty scarab-types—'Egypto-Minoan' patterns; Features of M. M. III 'Marine style' on* stela*; Spiraliform patterns on early* stela *from Egypto-Minoan repertory of Knossos; Discovery of remains of sculptured slab at Knossos with similar reliefs of interlocked rows of spirals; Flat relief of rounded shaft on slab compared with baetylic example in 'Tomb of Double Axes'.*

The altars and sanctuary fittings illustrated in the last Section lead us to a class of ornamental reliefs specially associated with the façades of

shrines and the portals of palatial buildings, of which the recent supplementary excavations have afforded new and striking evidence.

Triglyphs, &c., at Knossos and Mycenae.

The class of decorative bands, to which reference has already been made in the preceding Volumes of this work, consists of rosette and 'triglyph' friezes in hard stone, which will be seen to have a very special bearing on the origin of the similar works that adorned the façade of the monumental Tombs and of the Propylon of the Palace at Mycenae.

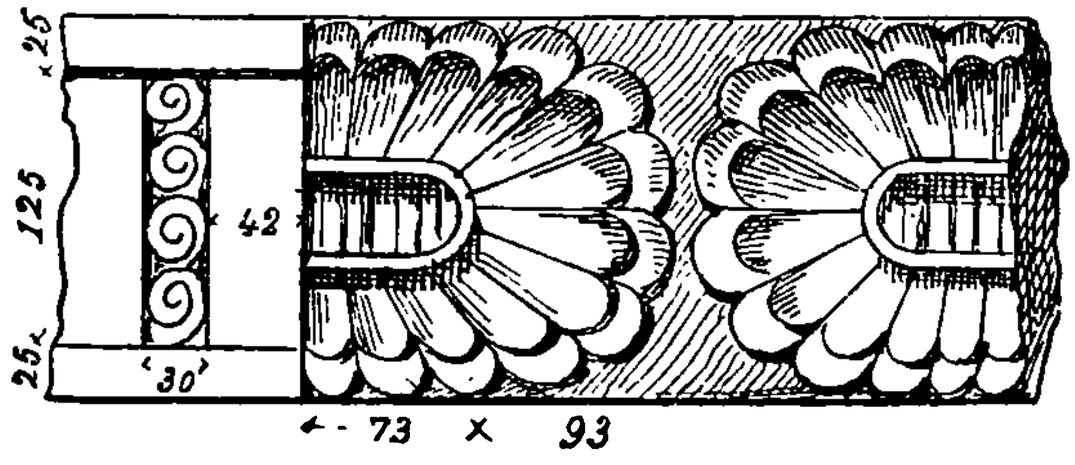


FIG. 171. PART OF FRIEZE FROM 'ATREUS' TOMB, MYCENAE.

This dependent relation of the architectonic decorative motives in the great Mainland centre is itself, as we shall see, only one evidence out of many of a much wider indebtedness.

The immediate relationship in which these stand to the similar relief-bands at Mycenae at once strikes the eye. So intimately bound up, indeed, with the Knossian Palace itself, and so historically important is the field of comparison thus opened, that, at the risk of repetition and of some digression, it seems necessary here to call attention to a series of decorative elements supplied by the 'Middle Palace' at Knossos that repeat themselves in the façades of the 'Atreus' and 'Clytemnestra' Tombs. To these may be added certain sculptural reliefs and lapidary works associated with the interior of their vaults or with their avenues of approach.

These correspondences establish for the first time on a secure basis the conclusion that the great bee-hive tombs belong to the same Third Middle Minoan date as the earliest elements of the Shaft Graves. They sap the very foundations of the theory, still held in certain quarters, according to which the two forms of interment are taken to represent the work of two successive dynasties, that of the pit burials being the earlier. They supply, in fact, the true clue to what may be not inaptly called 'the riddle of Mycenae'.

New Section of 'Triglyph' Frieze. Comparisons with 'Atreus' façade at Mycenae.

Discovery of fresh section of 'triglyph' and 'half-rosette' relief band.

A fresh example of a section of a frieze of the character referred to was —like the altar above described—also supplied by the recent explorations West of the Palace (Fig. 172). It occurred among the débris contained in a choked well thus brought to light in the South-West angle of the West Court, and, with its spiral triglyph between the half rosettes and

the barred 'tongues' within these, it answers in all its details to those that seem to have belonged to the doorway of the 'North-West Porch' (Fig. 172).

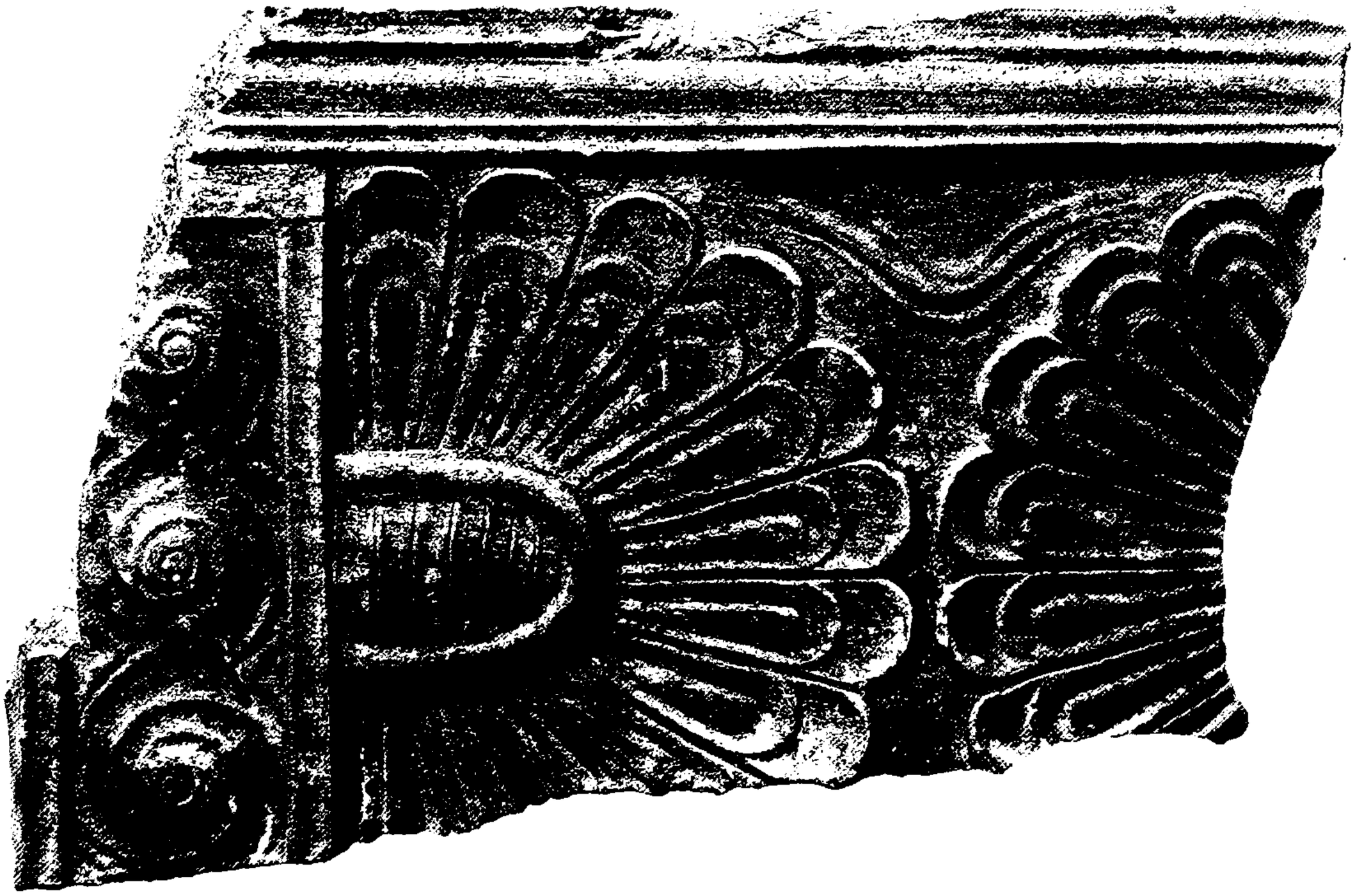


FIG. 172. NEWLY DISCOVERED SECTION OF HALF-ROSETTE AND 'TRIGLYPH' BAND FROM THE WEST COURT OF THE PALACE AT KNOSSOS. (*c.* $\frac{3}{8}$)

The measurements practically correspond, and, as in the other case, the material is a close-grained grey limestone.

Identical with frieze of 'Atreus' façade at Mycenae.

In my little work on the Shaft Graves of Mycenae[1] attention was drawn to the correspondence of the stone frieze from the Knossian Porch with the similar relief band of the 'Atreus' Tomb at Mycenae (Fig. 171) which also extends to the spiral decoration of the 'triglyphs' and the cross-bars on the 'tongues' of the rosettes. Fragments of similar friezes were associated with the 'Clytemnestra' Tomb and the Propylon of the Palace at Mycenae.[2] Whether imported ready carved in Cretan stone or executed on the spot,

[1] A. E., *The Shaft Graves and Bee-hive Tombs of Mycenae and their Interrelation* (Macmillans, 1929).

[2] W. Lamb, *B. S. A.*, xxv, p. 236, Fig. 47, *a* where another similar fragment of a frieze is illustrated (Fig. 47, *b*) from the Hellenistic Gymnasium at Mycenae.

it cannot be doubted that the reliefs of the Mycenae façade were the work of Minoan lapidaries trained in the Knossian School.

In painted design, fragments of similar half-rosette friezes—with a

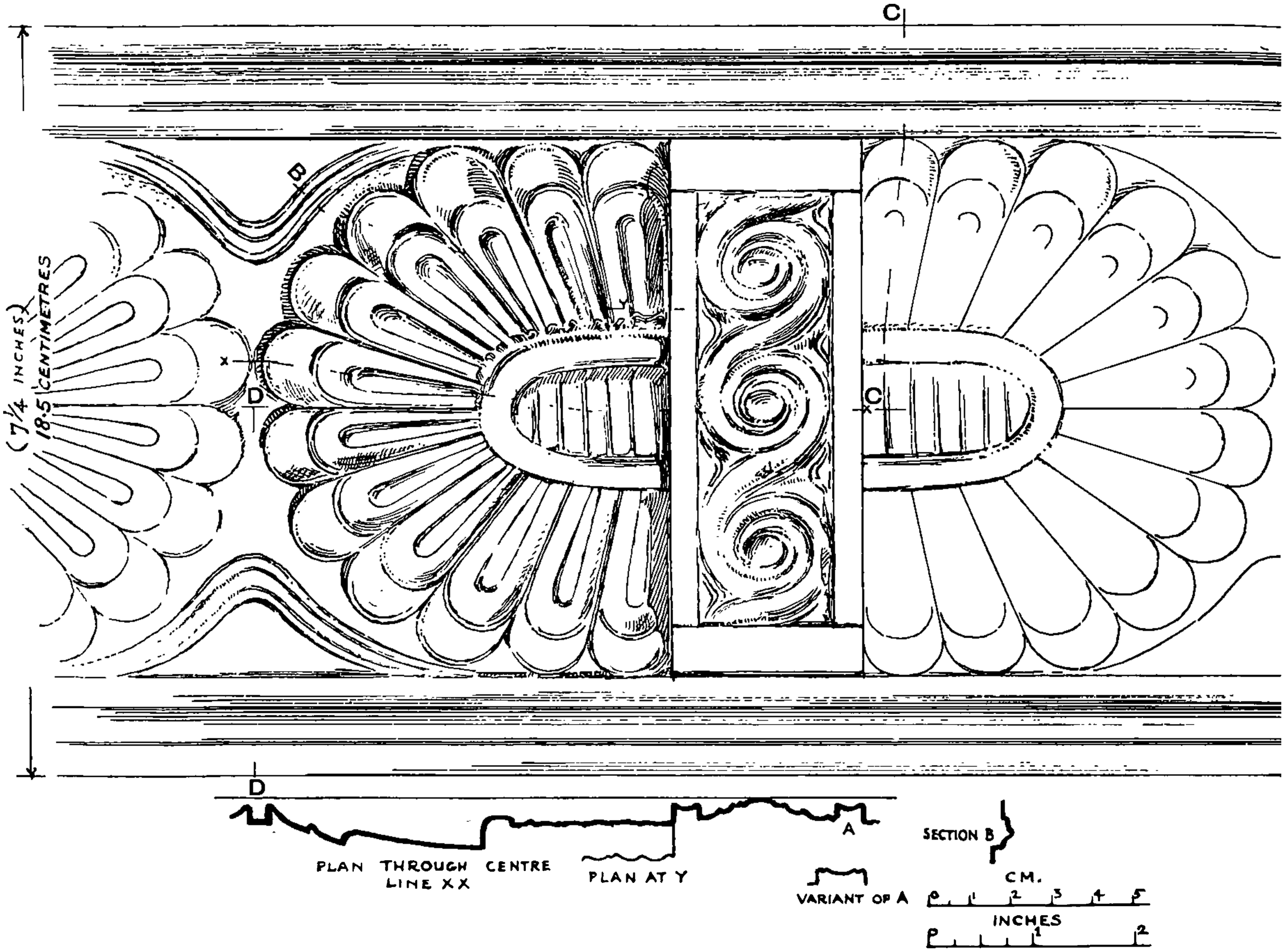


FIG. 173. PLAN AND SECTIONS OF PART OF 'TRIGLYPH' AND HALF-ROSETTE BAND FROM SOUTH-WEST PORCH, KNOSSOS. BY THEODORE FYFE.

Evidences of such friezes at Knossos in M. M. III frescoes.

different triglyph pattern—were found in the deposits beneath the lower receptacles of the cists in the XIIIth West Magazine at Knossos, the date of which seems to go well back within the borders of M. M. III.[1] A painted plaster copy of a triglyph and half-rosette is again seen below the central opening of the Columnar Shrine in the Miniature Fresco[2] answering, as has been shown, to the closing M. M. III stage. As in the case of the earlier

[1] A restored section of one of these painted plaster fragments is given in *P. of M.*, ii, Pt. II, p. 604, Fig. 377. For the early character of the fresco remains found in these receptacles see *ibid.*, i, p. 443 seqq.

[2] *Ibid.*, ii, Pt. II, p. 597, Fig. 371.

example from the XIIIth Magazine, the 'Sacral Horns' are here seen on a coping immediately above the 'triglyph' and 'half-rosettes; the curves of which are intimately associated with the incurved altar type'.[1]

Sculptured Bands at Mycenae offshoot of Knossian M. M. III Class.

Contemporary rosette bands.

These 'triglyph and half-rosette friezes' stand in an inseparable relation to other architectonic reliefs in which the whole rosette appears. The finest of all examples of such is supplied by the discovery—70 centimetres beneath the later *tarazza* floor of the South Propylaeum—of a fragment of a band executed in high relief in a brownish limestone with close graining, showing large parts of two rosettes.[2] This fragment, which, by analogy, may well have formed the border moulding of a great entrance portal on that side, must certainly be referred to the broad M. M. III phase of the Propylaeum.[3] In its deep, yet supremely delicate cutting it exceeds any known specimen of Minoan architectural sculpture (Figs. 174, 175.)[4]

It has further been shown that in the area of the old South-West Entrance Porch remains occurred of similar relief bands of rosettes, half-rosettes, and linked spirals also in an unquestionably M. M. III association.[5] The Porch itself was overwhelmed by the great catastrophe of the closing phase of that Period.

It may, indeed, be regarded as proven to the hilt that this whole group of architectonic reliefs had at Knossos reached its full maturity by the Third Middle Minoan Period and had even begun to be reproduced in the wall-paintings at that epoch. Of their antecedent stages in the great days of the earlier—M. M. I *b*–M. M. II—Palace no record has been preserved, but the moulded stone table of M. M. I *a* date brought out from House B, beneath Kouloura 3,[6] has now supplied a still earlier and unique example of fine stone-work mouldings with cavetto curves and prominent rolls. The evolution, within the Palace itself, in such a perfected form, of the brilliant sculptural details of the 'Minoan Order' by a date which may be taken to overlap the first half of the Seventeenth Century B.C. affords itself a signal indication of the development already attained in the preceding Age, and that on lines wholly independent of Egypt or the East.

Triglyph and 'half-rosette'

The circumstances under which the remains of the frieze of 'triglyphs' and half-rosettes were found in the case of the North-West entrance system

[1] See note, *ibid.*, pp. 607, 608 (Fig. 381).

[2] *Ibid.*, p. 696, and pp. 694, 695, Figs. 436, 437.

[3] *Ibid.*, p. 691 seqq., Figs. 434, 435, *b*.

[4] Reproduced from *ibid.*, ii, Figs. 436, 437.

[5] *Ibid.*, ii, Pt. I, p. 162 seqq., and Figs. 83, 84.

[6] See above, pp. 73, 74 and Fig. 46.

frieze of N.W. entrance.

make it probable that it had formed part of the work of restoration undertaken after the great catastrophe near the end of M. M. III. Since, however, the negative evidence possibly points to a certain dereliction of part of the

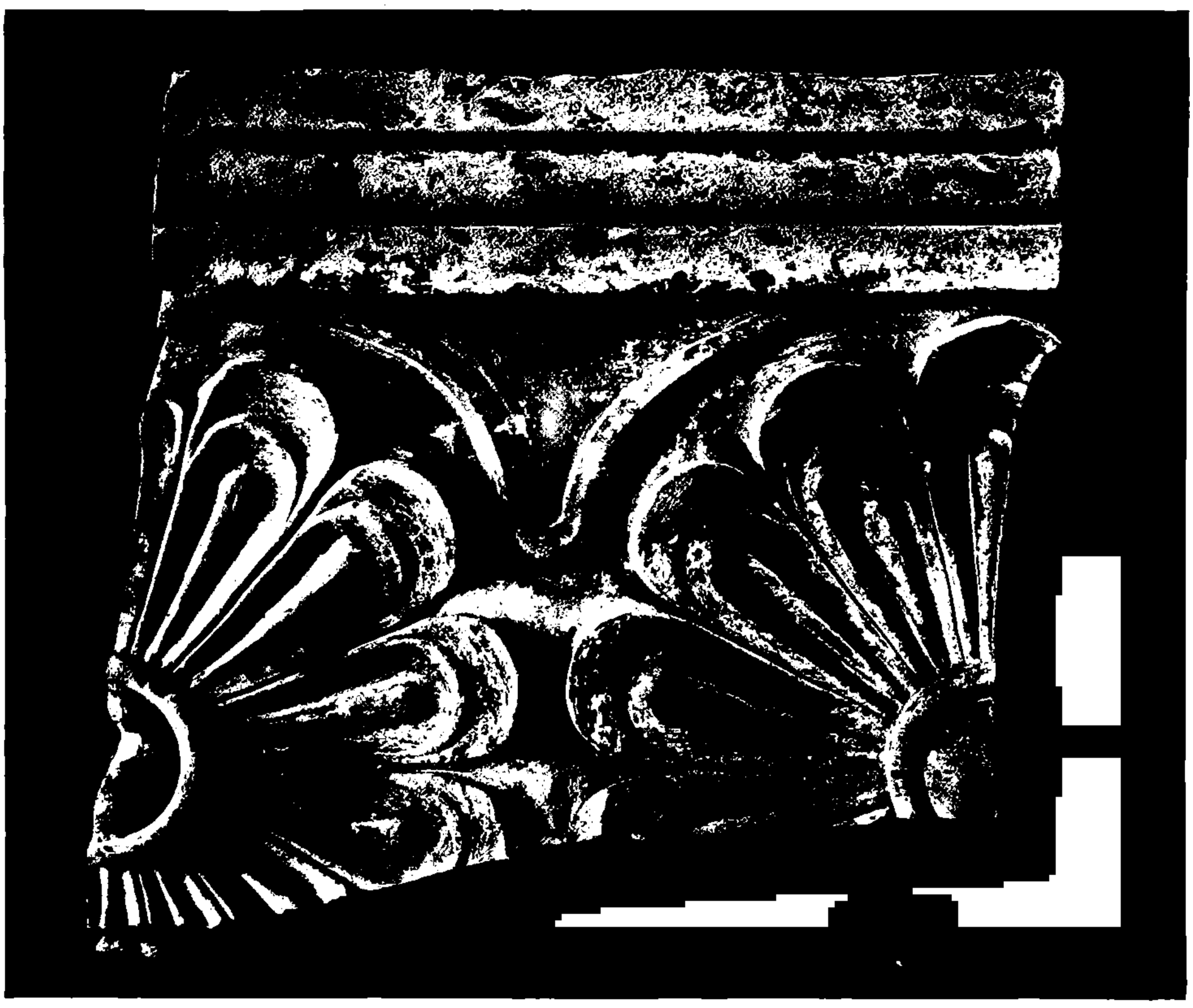


FIG. 174. PART OF ROSETTE BAND: SOUTH PROPYLAEUM.

West Palace section in the immediately ensuing epoch the frieze may well date somewhat later than the middle of the Sixteenth Century B.C. The amount, indeed, recovered favours the conclusion that it had kept its place on the walls to form part of the Palace as restored at the beginning of the next century and to have remained in evidence to its close.

Continuous M. M. III feature:

What is certain is that the earlier remains of this class of decorative reliefs are inseparably bound up with architectural history of the Third Middle Minoan Period from its earliest stage onwards.

That at Knossos, however, such reliefs were still familiar in the last Palace period may be gathered from an interesting piece of ceramic evidence. A remarkable 'amphora', described below,[1] in the L. M. II

[1] P. 348, and Fig. 291.

'Palace Style' shows a decorative version of the 'triglyph' and half-rosette, combined with the Double Axe, that recalls the fragments of early frescoes brought to light below the upper Cists of the XIIIth Magazine, depicting the façades of sanctuaries with the sacred weapon stuck into the shafts of columns. The vase design in turn finds a still more distant echo on a class of vessels common in the very latest Mycenaean phase.[1]

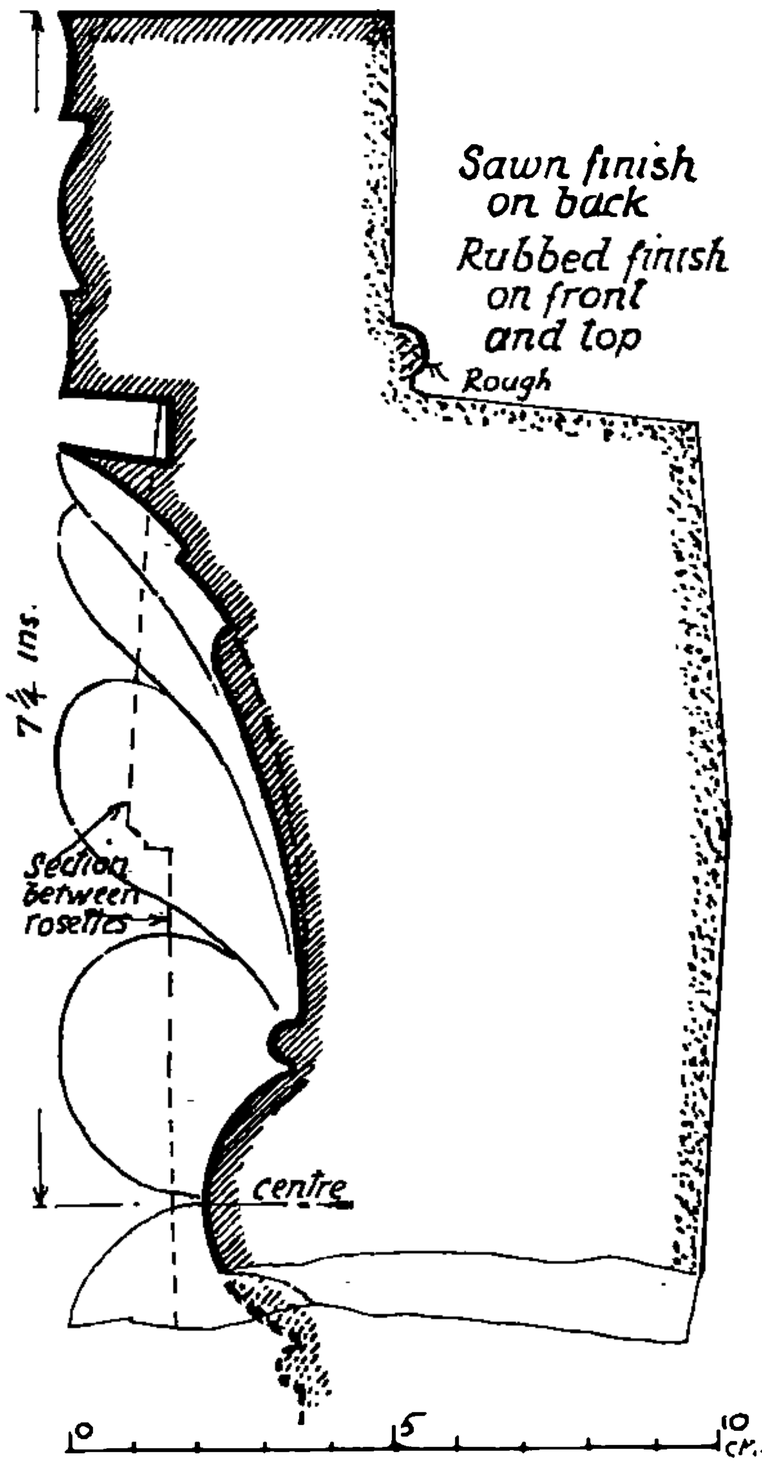


FIG. 175. SECTION OF ROSETTE BAND, SOUTH PROPYLAEUM; BY THEODORE FYFE.

Later Survivals of Minoan 'Triglyph' and Metope on Mainland Side.

Later painted frieze in Megaron Porch, Mycenae.

As a painted architectural decoration, remains of the regular type of 'triglyph' and 'half-rosette' frieze were observed by the British School excavators[2] on the lower part of the Porch of the Megaron at Mycenae. These, moreover, extend to the adjoining part of the Court, where they stand in relation to the painted stucco pavement, the square panels of which are decorated with coloured imitations of the grains of various stones. It is here perhaps worth noting that the zig-zagging lines seen on some of these panels answer to the conventional rendering of alabaster on L. M. I *b* vases.[3]

Alabaster frieze of Tiryns an out-growth of Knossian type.

A much fuller record has been preserved of the 'alabaster' frieze found in the Vestibule of the Queen's Megaron at Tiryns.[4] In this case both the more elaborate character of the decorative designs and the inlays of blue glass, as well as the structural associations, point to a L. M. III *a* date. But the material here was not improbably a Cretan importation[5] and every detail of the ornament is still Minoan. The inlaying habit is itself a very early Minoan tradition, and an element of transition is to be found in the inlays of which there is evidence in the centre of the spiral reliefs of the 'Atreus' façade. The general style

[1] See below, p. 346 seqq., and Fig. 290.

[2] W. Lamb, *B. S. A.*, xxv, p. 234. Fig. 46, p. 235, and Pl. XXXV, *a*.

[3] See below, pp. 270, 271.

[4] Doerpfeld in Schliemann, *Tiryns*, p. 248 seqq., and Pl. IV; see, too, Kurt Müller, *Tiryns*, iii, p. 139 seqq.

[5] Doerpfeld, *loc. cit.*

of the rosettes that here adorn the 'triglyphs' suggests those of the borders of the Orchomenos ceiling, where inlays also occurred.

Survival at Orchomenos and on rings, &c.

As a traditional feature the Minoan 'metopes' and 'triglyphs' long survived—if we may judge from the fragments found at Orchomenos[1]—on the Mainland side in wall-paintings representing buildings, no doubt of a sanctuary character. On the great gold ring, too, from Tiryns[2]—itself perhaps an heirloom—a frieze of this character appears as the base of a scene in which Minoan Genii approach the seated Goddess with drink offerings.

Reliefs of 'Atreus' façade fine M. M. III work.

But, as the evidence from Knossos abundantly shows, the beautifully cut reliefs in hard limestone slabs with which we are dealing represent the tradition of the Third Middle Minoan architectonic style. When identical types in an identical style, and, in some cases apparently, identical stone, appear at Mycenae, on the façade of the 'Atreus' Tomb for instance, these must be regarded as contemporary work.

Bull Reliefs on Elgin Slabs from Fore-hall of 'Atreus' Tomb ot M. M. III Knossian Derivatives.

A further connexion of this splendid monument with the great Transitional Age of Minoan Art at Knossos has already been established in the reliefs on the fragmentary slabs—themselves of Cretan gypsum obtained by Lord Elgin from what seems to have been a kind of fore-hall before the entrance of the great bee-hive vault itself. These reliefs,[3] belonging to a bovine animal, coursing in the one case and stationary in the other, have been associated in this Work with the two contrasted scenes of the Vapheio Cups, *ex hypothesi* derived from two great bull-grappling compositions of which we have remains, formerly set out in the Porticoes on either side of the 'Northern Entrance Passage' at Knossos. The execution of these goes back, as has been shown, well into the Third Middle Minoan Period, and the noble head of the charging bull in painted plaster relief belonging to the group on the West side is clearly the artistic source of the similar head on the Elgin slab. The style of this, moreover, on a lesser scale, corresponds with that of the Knossian relief.

[1] H. Bulle, *Orchomenos*, i, Pl. XXVIII, and p. 73.

[2] G. Karo, *Arch. Anzeiger*, 1916, pp 146, 147, Fig. 5. See now his separate publication.

[3] See *P. of M.*, iii, p. 194, seqq., and cf. p. 11, Fig. 4, above.

Spiral and Plaitwork Fragment of Gypsum Capital from 'Clytemnestra' Façade of M. M. III *a* Character.

Fragment of gypsum capital from 'Clytemnestra' façade, Mycenae.

But the special connexion with the 'Palace of Minos', illustrated by the decorative elements of the 'Atreus' façade and by the sculptured slabs in front of it, does not end here.

The other great *tholos* of Mycenae, known as the 'Tomb of Clytemnestra'—distinguished, like that of 'Atreus', by its once highly decorated façade and to be regarded as a parallel and more or less contemporary monument—has afforded further evidences of this relationship to the M. M. III elements of the Knossian Palace.

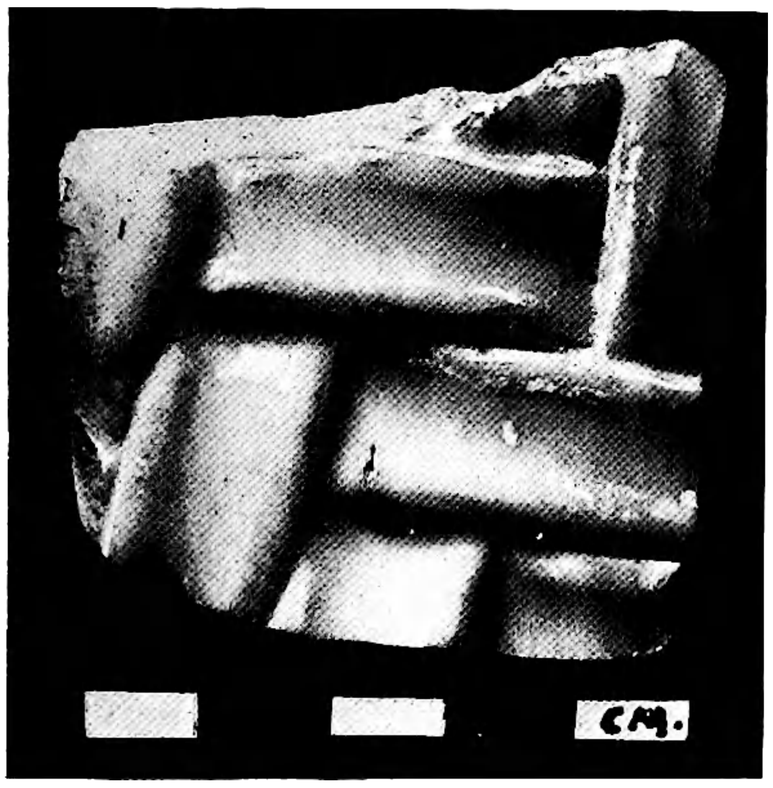


FIG 176. FRAGMENT OF EWER IN MARBLE LIKE LIMESTONE, FROM M.M. III *a* DEPOSIT. S.W. LUSTRAL AREA, KNOSSOS.

In the course of repairs to this Tomb made in 1913 a sculptured fragment came out, which, in view of the very definite data connected with the 'North-East Lustral Basin' at Knossos and the stratum in the adjoining area that produced the inscribed alabastrum lid of the Hyksos King, Khyan,[1] is of quite exceptional importance in relation to this monument. It was of an architectonic character and is described by Mr. Wace[2] as a 'fragment of gypsum carved with a spiral pattern with the angles filled in with a plaited design, perhaps from the capitals of the engaged columns on either side of the doorway.' Not only in this case was the fragment of imported Cretan gypsum, but the plaitwork design seen in the angles must itself be regarded as the most typical form of decoration as applied to stone objects in vogue in the earlier phase, *a*, of the M. M. III Period. It is repeated again and again on remains of vessels of brown steatite and white marble-like limestone found in the area referred to, in deposits clearly assignable to that epoch. A fragment of a marble-like ewer from this stratum is given in Fig. 176. The disappearance of the fragment of the capital with this typical decoration in the Museum at Athens, where it was deposited, must be a lasting source of regret.

Its spiral and plaitwork decoration typical of M.M. III *a*.

[1] See *P. of M.*, i, p. 419 seqq.

[2] *B. S. A.*, xxv, pp. 366, 367. It was transferred to the Museum at Athens, but cannot now be found. Both the present Director and his predecessor have very kindly made a thorough-going search for the missing object, but prolonged researches have led to no result.

FIG. 177. 'MEDALLION' PITHOS; XTH MAGAZINE, KNOSSOS.

Steatite Medallion *Pithoi*, like those of Royal Magazines of Knossos, (M. M. III) found in 'Clytemnestra' Tomb at Mycenae.

With regard to the 'Clytemnestra' Tomb, another remarkable piece of evidence came out which stands in relation with the Royal Magazines of Knossos and takes us once more within the borders of M. M. III.

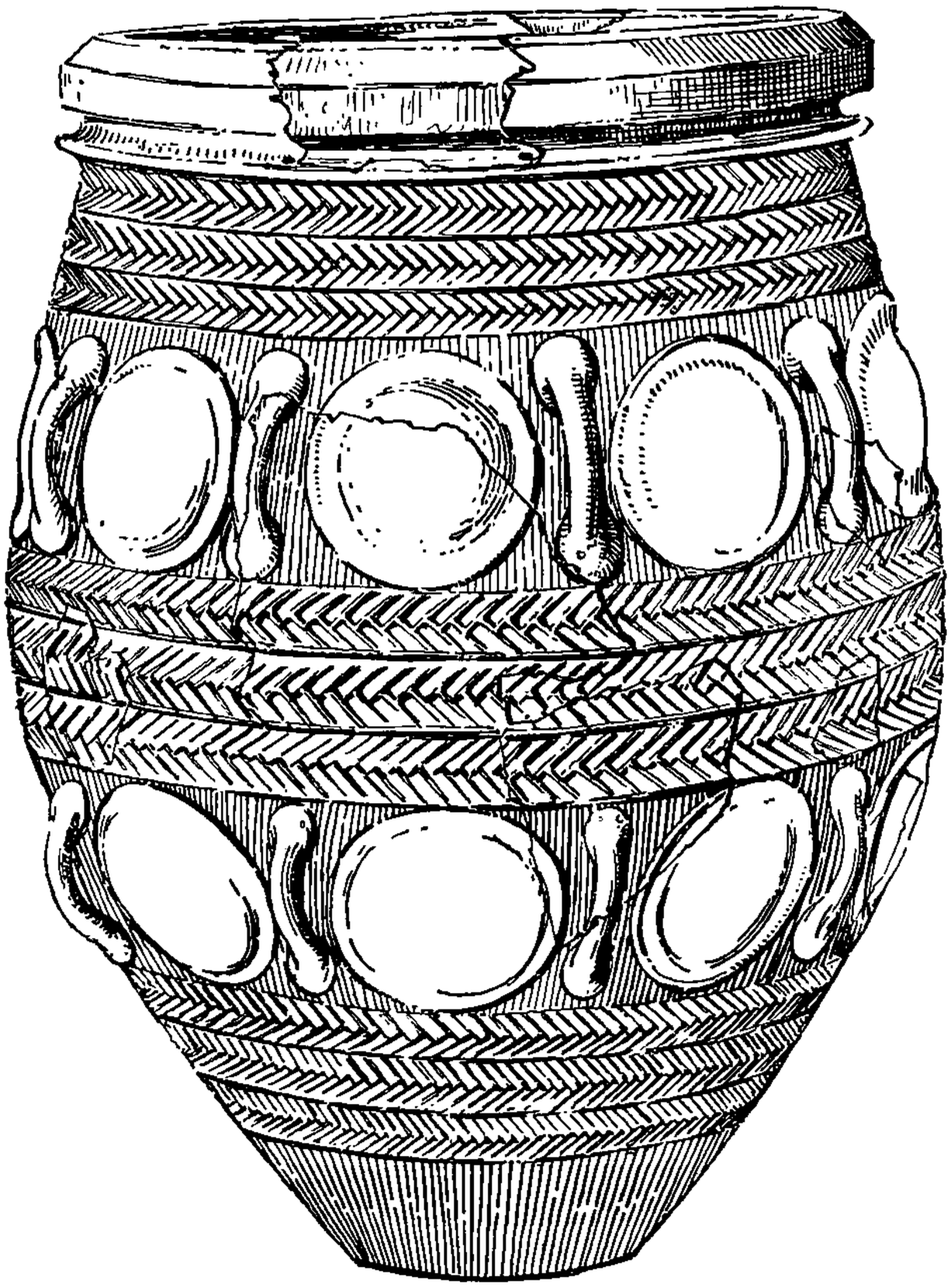


FIG. 178. 'MEDALLION' *PITHOS* OF DARK GREEN STEATITE FROM 'CLYTEMNESTRA' TOMB. RESTORED BY MONSIEUR E. GILLIÉRON, FILS. HEIGHT, *c.* 3 FT.

Steatite Medallion *pithoi* found in 'Clytemnestra Tomb'. Resemble those of 'Royal Magazine' of Knossos —M. M. III.

In the course of the original excavation of this tomb several pieces of large store-jars or *pithoi* had been found formed of dark green steatite, one of which was misleadingly published by Schliemann as 'part of a frieze', and drawn in such a way as to disguise its rounded surface. It was described as of 'blue and white marble'. Additional pieces came out during the repairs of 1913—making 15 fragments in all—ten of which were found by the British investigators of 1922 to belong to a large vessel resembling the 'Medallion *pithoi*' of Knossos. A fine specimen of one of the latter is repeated in Fig. 177, and from the improved restoration[1] of the steatite jar from the 'Clytemnestra' Tomb given in Fig. 178 it will be seen that it reproduces the essential features of the clay prototype. Owing to its material it was naturally of smaller dimensions, being about three feet, or somewhat under a metre, in height, instead of four feet eight inches (1·43 metre). As a proof of its Knossian connexion

[1] From a restored drawing by Monsieur E. Gilliéron, fils. The shape, as originally put together (*B. S. A.*, xxv, p. 367, Fig. 80), was too dumpy. The handles, possibly of bronze (restored in Fig. 178), were attached by means of wires inserted in holes arranged in pairs above and below, by which the walls of the vessel were perforated.

the plait-work bands are of special importance, since they can be shown to have been a feature of the clay *pithoi* there as well as being characteristic of M. M. III *a* stone vases.[1]

The dark green steatite material of these jars itself very closely corresponds with that found in large masses in the Sarakina Valley in Eastern Crete, and it seems most probable that this soft-stone copy was executed in a Palace workshop, where the lapidary could study the clay originals. These jars may well have been actually transferred from the royal cellars at Knossos to the sepulchral vault at Mycenae.

There were also found within the vault four pieces of a large vase of red stone[2] 6 centimetres thick, 'with a heavy moulded rim, but undecorated', probably part of another store-jar.

Fragment of limestone *pithos* from W. Magazines, Knossos.

That great stone *pithoi* actually existed in the Knossian Palace is proved by one piece of evidence, which, though solitary and of no direct chronological value, is, still, convincing. Near the South end of the Long Corridor of the Magazines, in disturbed earth, there occurred a fragment of a large white limestone jar, of which a sketch is given in Suppl. Pl. LII. It shows the edge of a slightly raised band and the attachments of a handle, and its walls, like those of the fragment of the red stone jar from the 'Clytemnestra' Tomb, was as nearly as possible 6 centimetres thick.

Rule that copies are made from forms in vogue excludes theory that 'Clytemnestra' *pithoi* date from centuries later.

The view put forward in the *British School Annual* that the steatite 'medallion *pithoi*' found in that Tomb were of later date than the period covered by the fabric of the clay jars themselves, will not bear examination. Certainly the clay models must have existed before the copies were made in soft stone. But experience shows that copies of objects are made when the objects themselves are in vogue. Such imitation does not arise when they have gone out of-fashion. That they were executed when 'medallion *pithoi*' were still made for the Royal Magazines at Knossos—not later than the closing phase of M. M. III—is hardly open to reasonable dispute. It may be a moot point whether the two or three specimens found in the West Magazines, as restored at a somewhat later date, represent a continuous manufacture or are not, at times, survivals from the Magazines as they existed before the catastrophe, but in any case, at the lowest computation, they could hardly have been in vogue later than the middle of the Sixteenth Century B.C.

These fine jars were the peculiar fabric of the Royal potters of Knossos and no remains of such have occurred on any other site. The record of the last stray survivors on the floors of the Magazines was itself obliterated

[1] See Part II, p. 636, Figs. 623–25.

[2] Wace, *op. cit.*, p. 366. There were, besides, remains of another vessel like Fig. 178.

by the final overthrow of the Palace about the close of the Fifteenth Century B. C. Even in the days of the earlier Late Minoan phase we already find derivative types of the 'Medallion *pithoi*', such as the pithoid jars and 'amphoras' described below.[1]

According to the view above referred to, these jars were copied in stone in the days of 'Mycenaean' decadence,[2] and, at a date not earlier certainly than about the middle of the Thirteenth Century B. C. The theory that we have here copies from originals the fabric of which was two centuries earlier in date and themselves at least a hundred and fifty years later than the final disappearance of the originals from use, may at least be said to involve one interesting consequence. The buried Magazines of Knossos must in that case have been the scene of expert excavation on the part of the Kings of Mycenae.[3]

Smaller Stone Vessels of Characteristic M. M. III Fabric from 'Clytemnestra' and 'Atreus' Tombs.

M. M. III *a* stone vases with plaitwork and inlays from 'Clytemnestra' Tomb.

Other smaller vessels of the same date were in fact found in connexion with these two *tholos* Tombs. Among the Schliemann finds in the 'Tomb of Clytemnestra' was a doubly significant fragment of a vase. It is part of the side of a vessel in black and white stone with plaited basket-work or leather-work pattern on the outside as Fig. 176 and ornamented irregularly with small drill-holes for inserting some inlay.[4] Here, again, we have the characteristic plaitwork of the ewers found in the M. M. III *a* stratum in and about the 'North-West Lustral Basin at Knossos', that has been already noted in connexion with the fragment of the gypsum capital.[5] As an illustration of the pattern a piece of one of the vessels from that area in white, marble-like limestone, has already been given in Fig. 176. In the case of

[1] See below, p. 261 seqq.

[2] Mr. Wace, *J.H.S.*, xxv, p. 374 refers these steatite *pithoi* to the beginning of his 'Late Helladic III', which represents a phase illustrated by the sherd found beneath the 'Atreus' threshold, more or less parallel with the early part of L. M. III *b*, according to the Cretan classification. By Mr. Wace the date is, impossibly, referred to the Age of Tell-el-Amarna, the first half of the fourteenth century B. C.

[3] Wace, *J. H. S.*, xlvi, p. 112, falls back on the theory that they were 'antiques', like the Egyptian stone vessels that not infrequently occur in later deposits. But, as we have seen, they represent only a part of a series of stone vessels and reliefs all of the same M. M. III date. The Kings of Mycenae were hardly such antiquarian connoisseurs as to pick up 'period' pieces, just as a modern amateur might collect Jacobean furniture or Ming china.

[4] *B. S. A.*, xxv, p. 364 (No. 68). Mr. Wace rightly observes that the vessel may be Cretan, and compares the M. M. III stone vases. Unfortunately this doubly interesting fragment has since disappeared—like the fragment of the 'Clytemnestra' capital already mentioned—in the Athens Museum.

[5] See above, p. 229.

the 'Clytemnestra' fragment, moreover, the further decoration consisting of drill-holes for the insertion of inlays combines the other most characteristic feature of the stone vessels from the above-mentioned area, noteworthy for the discovery of King Khyan's lid.

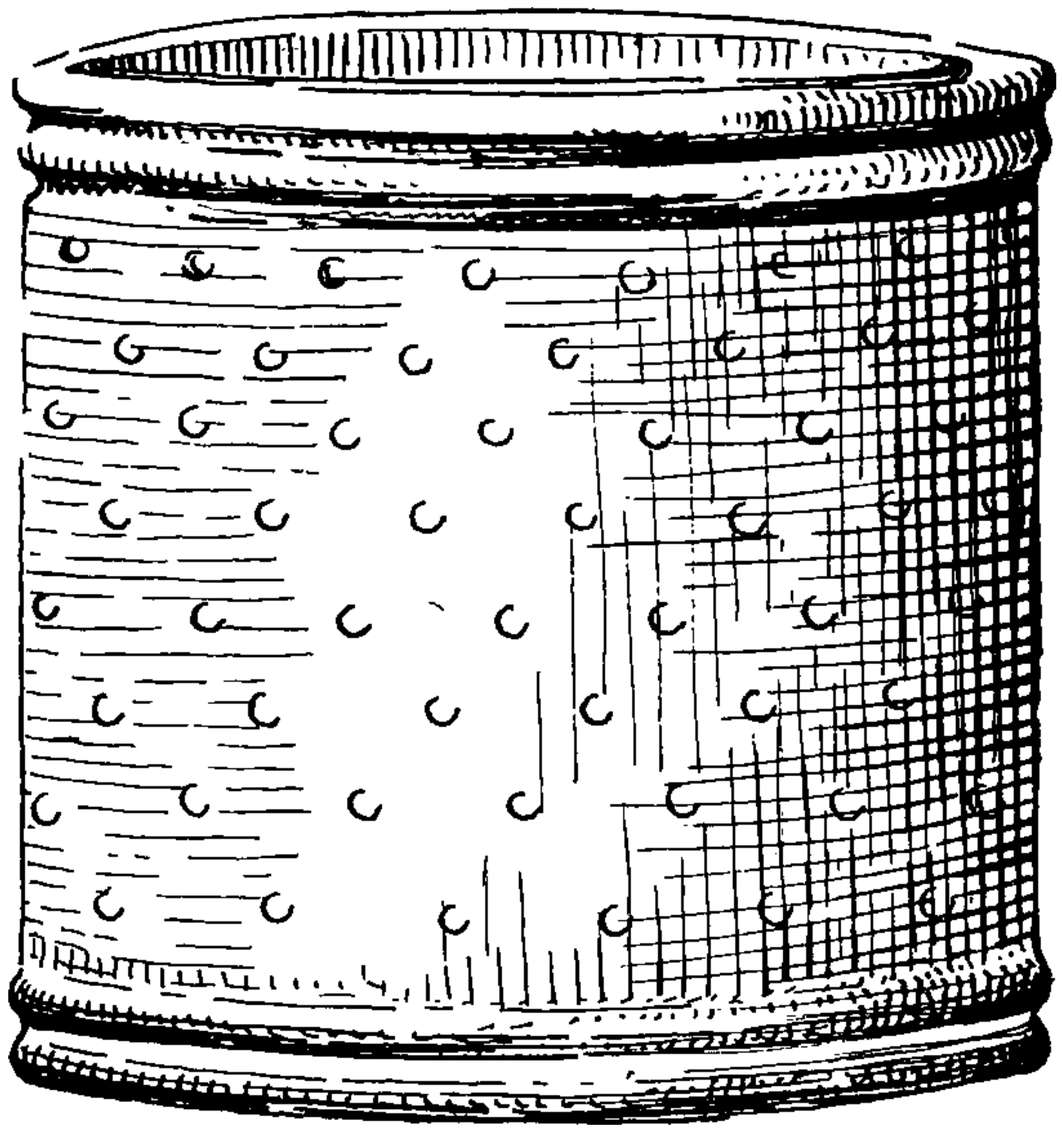


FIG. 179. LIMESTONE POT WITH HOLES FOR INLAYS FROM DROMOS OF 'ATREUS' TOMB: RESTORED.

As a supplement to this fragment may be mentioned a cylindrical jar of which six pieces were found by Stamatakis in the *dromos* of the 'Atreus' Tomb[1] and which is here restored in Fig. 179. Part of the lid was also found. This vessel, of grey-green stone, was about 15 centimetres in diameter and of the same height, with walls about 2·5 centimetres thick, pitted with small rather shallow hollows for the insertion of inlaying material, possibly, in this case white or red plaster. Here, again, both the hollows for inlaying and the grooves seen along the upper and lower margin are characteristic features of the earlier M. M. III phase. In the same place was also made the parallel discovery of 'a piece of pink and white veined limestone (2 cm. thick)' with similar small round holes for inlays.[2]

Fragment of breccia 'rhyton' with inlays from 'Atreus' *dromos*.

Of still greater interest is the fragment, also from the *dromos* of the 'Atreus' Tomb, illustrated in Fig. 180,[3] which takes us back to the more elaborate Middle Minoan method of stone inlaying. It consists of a kind of breccia, the surface of which has been hollowed out in two places by means of a cylindrical drill for the insertion of patches of white inlay. The stone, predominantly dark, with bright red veins showing white crystalline borders, will be very familiar to Cretan explorers. It is in all respects similar to that produced by the quarries of the Kakon Oros, the headland of ill name on the coast a little East of Knossos,[4] and its use for vases was

[1] Wace, *B. S. A.*, p. 353 (No. 82).

[2] *B. S. A.*, p. 353 (No. 82).

[3] See A. E., *Shaft Graves, &c.*, p. 82 seqq., and Figs. 62, 63. The account there given is repeated here.

[4] This breccia is also found South-West of Knossos, near Viano, East of the Mesarà Plain, and a very good quality of it that occurs

most prevalent in the initial phase of the Middle Minoan Age.[1] Column-bases, however, of this kind of breccia occur at Knossos in the East Portico of the Palace and in the adjoining 'Spiral Fresco' Area,[2] belonging to M. M. III *a* Cretan breccia.

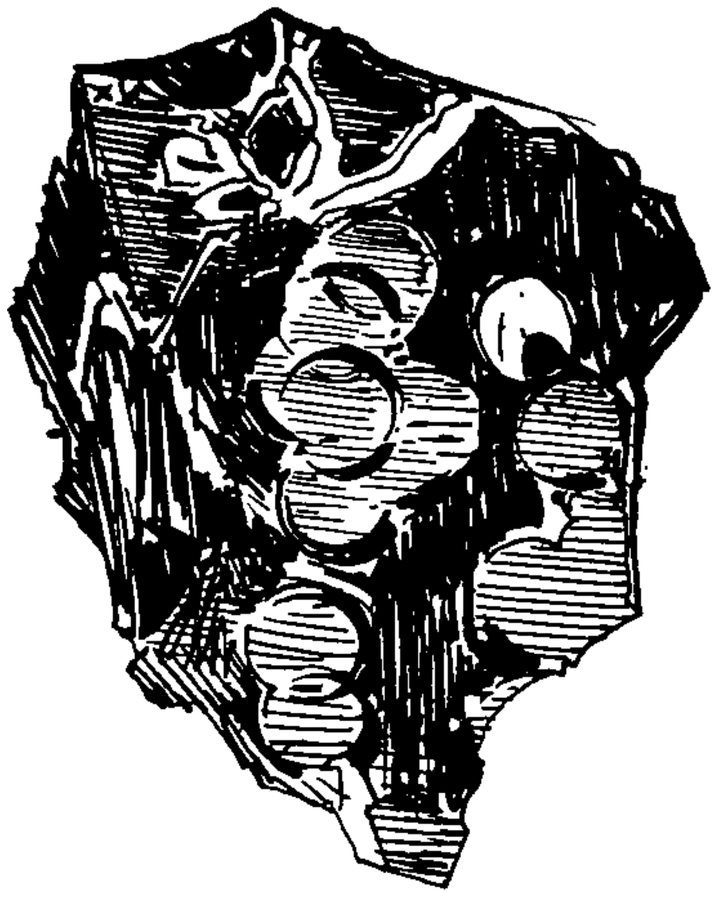


FIG. 180. BRECCIA FRAGMENT WITH QUATREFOIL INCISIONS FOR INLAYS FROM DROMOS OF 'ATREUS' TOMB.

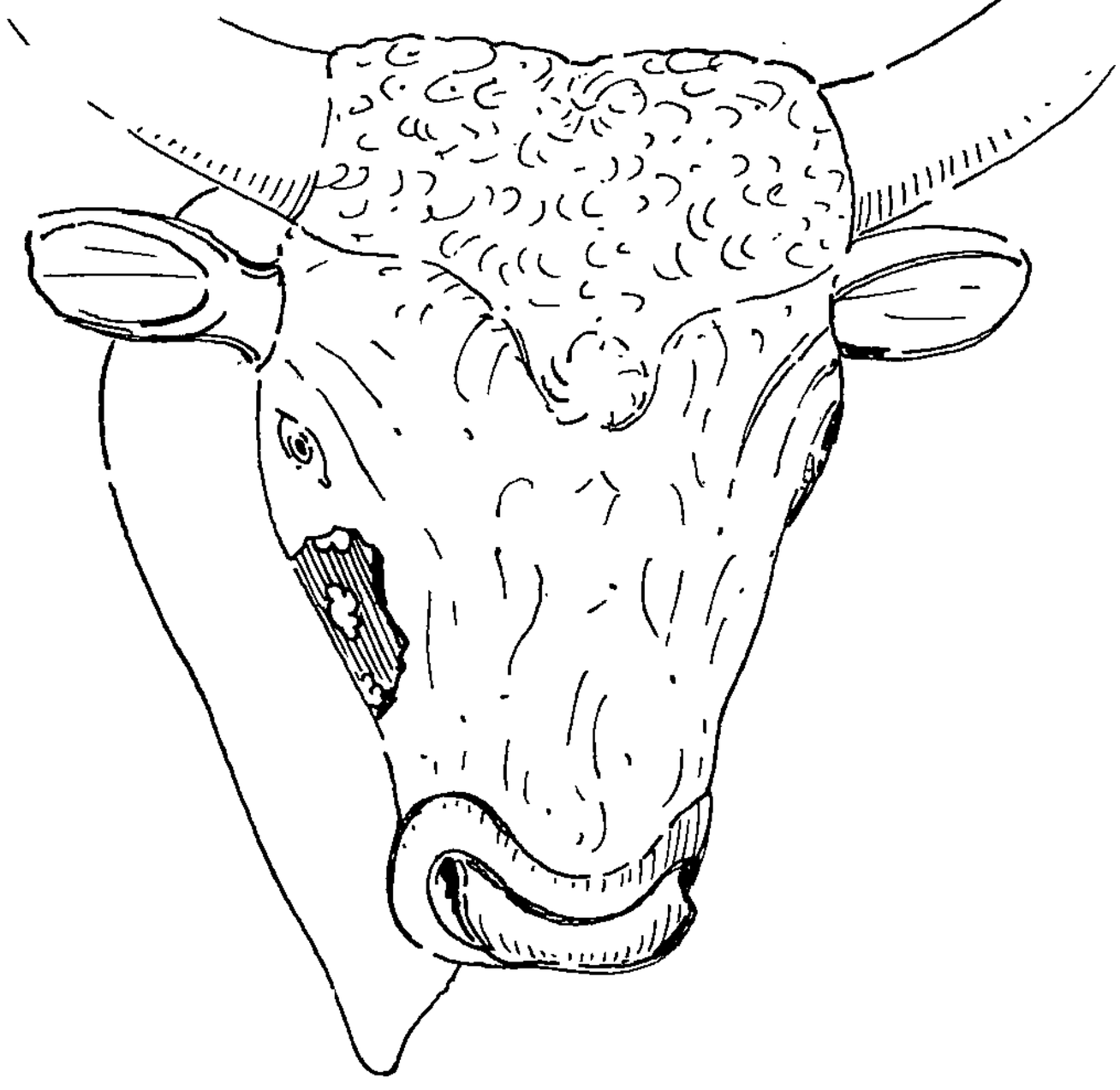


FIG. 181. RESTORED VIEW OF BULL'S-HEAD 'RHYTON' WITH BRECCIA FRAGMENT INSERTED.

and, though not improbably in this case derived from the earlier Palace, show the continued appreciation of this beautiful material at that epoch. Still, the vase to which the above fragment belonged clearly represents the earlier tradition as opposed to that of the last phase of the Middle Minoan Period, when, as in the succeeding Late Minoan Age, the stone vessels are normally of less hard materials, such as steatite, limestone, and native alabaster.[3]

The fragment supplies a valuable clue to its original connexion in the

near Hagios Nikolaos supplied the material for some of the beautiful stone vases obtained by Mr. Seager in the Mochlos Cemetery (e. g. *P. of M.*, i, p. 177, Fig. 126).

[1] Stone vessels of the 'bird's-nest' type of this material often with lids, were a good deal in vogue in M. M. I (see *P. of M.*, i, pp. 177, 178, and Figs. 126, 127, *a*). The characteristic red veins with white borders were much imitated in M. M. I and II polychrome ware. The 'bird's-nest' type of stone vases is itself taken from Egyptian vessels of the Early Kingdom, going back at least to the Fourth Dynasty.

[2] *Op. cit.*, pp. 211, 212, and Fig. 157.

[3] *Op. cit.*, pp. 411, 412.

Part of bull's head 'rhyton'.

traces of circular borings made to contain pieces of inlay. One of these pieces, moreover, still holds within it the greater part of a cylindrical section of white marble-like material. The circular borings are grouped in one case into a kind of quatrefoil, recalling the conventional rendering of the spots on bulls in Minoan Art, and there can be little doubt that the fragment formed part of a typical bull's-head rhyton, such as is shown in Fig. 181. In the case of the remains of a bull's-head rhyton from the 'Tomb of the Double Axes' at Knossos[1] quatrefoil inlays of this kind were found, consisting of a dark grey stone. These conventional spots, sometimes trifoliate, represent a tradition of high antiquity. Not only do we find a parallel series in the case of the Hathor cows,[2] but rhytons in the form of bulls with inlays of this kind have been found in Chaldaea,[3] of old Sumerian fabric, going back at least to the beginning of the fourth millennium before our era.

Intimate Relation of 'Atreus' and 'Clytemnestra' Tombs with M. M. III Palace of Knossos. Synchronous thus with earliest Shaft Grave Elements.

Sculptured details of the two great *tholoi* as well as interior relics connected with M. M. III Palace at Knossos.

These converging lines of evidence lead to two conclusions of great interest. On the one hand, whether we regard the façade decoration of the two finest and most decorative of the Bee-hive Tombs of Mycenae, or the sculptured slabs found in the 'Atreus' hall, or again the steatite 'Medallion *pithoi*', or the remains of the inlaid stone vessels found within these great vaults or their entrance passage, it is to be the 'Middle Palace' at Knossos —and in nearly every single instance, to it alone—that we have to turn for the originals. This intimate relation of Mycenae in its earliest stage to the 'House of Minos' is a historic fact that can never be left out of account.

Synchronous with earliest Shaft Grave element.

Not less important is the parallel result so clearly indicated by the above phenomena, in this case of a chronological character. Alike the architectural decorations of these two sepulchral monuments and the relics with which they are associated are characteristic products of the Third Middle Minoan stage of Knossos, and, in almost all cases, demonstrably go back to its earlier phase, in other words, at least, to the first half of the Seventeenth Century B.C. In many cases the material itself is Cretan.

In other words the contents of these great vaults are at least as early as the most ancient relics found in the Shaft Graves—in all probability, in part at least, somewhat earlier.

[1] A. E., *Tomb of the Double Axes, &c.* (*Archaeologia*, vol. lxv), pp. 52, 53, and Fig. 70.

[2] Cf. *P. of M.*, i, pp. 513–15, and Fig. 370.

[3] See *P. of M.*, ii, pp. 260–4, and Fig. 156.

New Lights on 'the Riddle of Mycenae'. Interments transferred from Bee-hive Tombs to Shaft Graves in Times of Danger.

In my work on the interrelation of the Bee-hive Tombs and Shaft Graves of Mycenae the bearing of this hitherto unregarded evidence of other related phenomena on the finds there has been pointed out in some detail.[1] The connexions thus established may be thought indeed to have solved what had been hitherto the great 'Riddle of Mycenae'.

Impossible theory of earlier and later Shaft Grave *tholos* dynasty at Mycenae.

Here in one case, we find magnificent mausolea without contents, while in the other—just within a neighbouring bay of the city wall constructed to contain them—are mere stone-lined pits closely packed together, but containing the richest group of burial deposits that has ever been brought to light.[2] Both groups of tombs may be fittingly described as 'royal', but it was plainly impossible to suppose that two separate contemporary dynasties had existed at Mycenae burying their dead almost within a stone's throw of each other in two entirely different fashions.

It had thus become a generally accepted axiom that the two different kinds of sepulture of which we have evidence in the early remains of Mycenae supply the records of an earlier and a later dynasty. To the earlier of these were ascribed the pit-graves unearthed by Schliemann within the later Acropolis wall, much of the contents of which was from the first recognized to be of great antiquity. By Dr. Adler and others the construction of these was referred to the Danai. The great bee-hive chambers, which by analogy must also have served a sepulchral purpose, though found void of their contents, were, archaeologically speaking, 'to let', and excellent tenants were found for them in the Achaeans.

This idea of an earlier and later dynasty marked by distinctive modes of burial, was, indeed, once more brought forward in connexion with the recent excavations of the British School at Athens at Mycenae.

According to the view there expressed, part of the old native cemetery (distinguished by cist graves with 'rustic' contents) was made use of by a new dynasty, which came in 'not long before the beginning of the Sixteenth Century B. C.', and to which the name of the 'Shaft Grave Dynasty' is there given. The cemetery, according to this theory, went out of use for royal interments in the Mainland Period ('Late Helladic I'), contemporary

[1] *The Shaft Graves and Bee-hive Tombs of Mycenae and their Interrelation* (Macmillan, 1929). For features of relationship between the Mycenae *tholoi* and the primitive examples of Mesarà, e.g. the lintel blocks, see *P. of M.*, ii, Pt. I, p. 40 seqq. For the 'well-chamber' at Arkhanes, resembling the Bee-hive Tombs of Mycenae in construction, see, too, *op. cit.*, p. 64 seqq., and Figs. 29, 30. Excerpts from my Shaft-Grave book are here inserted in the text

[2] For the richness here consists not only in the weight of bullion but in the artistic values.

with the First Late Minoan of Crete, possibly 'because a new dynasty now sat on the throne of Mycenae'. From about the end of 'L. H. I' begins the series of Tholos Tombs, 'which from their impressive and noble architecture we can only regard as the tombs of kings. . . . The different method of burial inclines us to the belief that a change of dynasty took place at Mycenae'. This 'second dynasty' Mr. Wace calls the 'Tholos Tomb Dynasty'. Since, typologically, the 'Atreus' and 'Clytemnestra' Tombs represented the most advanced aspect of the development of these great vaults, the logical consequence was to refer their construction to a considerably later date and to a period defined as 'Late Helladic III', the ceramic equivalency of which he further sought in a sherd found beneath the broken and repaired threshold of the 'Atreus' Tomb[2], in fact belonging, according to the Minoan classification, to an epoch roughly corresponding in Cretan terms with the beginning of L. M. III *b* and to a date some three centuries later than the establishment of the 'Shaft Grave Dynasty'.

Incongruous attribution of 'Atreus' Tomb in days of Mycenaean decadence.

The attribution of this, the most splendid monument of Minoan architectural Art on the Mainland side, to the last Age of Mycenaean decadence, might itself be regarded as a *reductio ad absurdum* of this theory.

The connexions with Middle Minoan Knossos here established show that in fact the finest architectural stage of the bee-hive tombs was really that represented by the earliest of those built at Mycenae. Whatever were the antecedent stages of these great vaults, they make their appearance in Mainland Greece in a fully Minoized form, while others, typologically less advanced, were chronologically later.[3]

The construction of the Tombs of 'Atreus' and 'Clytemnestra', as other comparative data show, thus corresponds with the M. M. III phase represented by the earliest elements in the Shaft Graves. The idea that the two sepulchral forms represent two different dynasties must, in view of the Knossian evidence, be definitely discarded. How can the Tholos Tombs be later than the others when both their sculptural associations and elements of their contents go back to M. M. III?

Transference of burials for protection from bee-hive tombs to

But if here we have the records of one and the same dynasty—the great vaults on the one side, empty of their burials, the pits on the other with their huddled interments—the field is free for the natural explanation

[1] *B.S.A.*, xxv, p. 391 and cf. *J.H.S.*, xlvi, p. 110 seqq.

[2] *Ib.*, p. 357, Fig. 76 *a*. (For this degenerate fragment see below p. 352, Fig. 294, and p. 350 seqq.)

[3] Dr. Hall, in his review of my Shaft-Grave work, published, after his death, in *J. H. S.*, l (1930), pp. 337, 338, compares the sudden appearance of a mighty Pyramid, due to 'a great genius like Imhotep'.

of the whole phenomena. The original interments of the mighty dead and their treasured relics had taken place in the bee-hive tombs. At a time of pressing danger the contents of these had been transferred to pits in the old cemetery beneath the walls where the indigenous Helladic folk had buried their dead in shallow cists in earlier days. As, indeed, is seen from the Sixth Shaft Grave—a real burial[1]—and by another grave, the base of which was found by the explorers of the British School, nearer the Lion's Gate, the Minoan Conquerors had already from the first partly devoted this area for purposes of interment.

Shaft Graves within the walls natural explanation.

It is safe to infer that this general removal took place at a date considerably later than the bulk at least of the original sepultures within the great bee-hive vaults.

The latest painted pottery of the Minoan class found in the Shaft Graves is that of Grave I. The group of three interments, here brought to light, probably, as in the case of Grave III, of women, contained indeed one fine ewer exhibiting the best 'marine style' of L. M. I *b*, the designs of which still show signs of unfixed white pigment—an early symptom. On other clay vessels, however, from this Grave we see the degradation of the double-axe motive into a kind of bivalve shell with wavy lines above and below, and a simple dotted background.[3] This in fact represents an outgrowth of L. M. I *b*, hardly represented in Crete itself, but very characteristic of Mainland Greece, and which must indeed have largely run parallel with the later phase of L. M. II 'Palace Style' of Knossos. As proposed below, this stage from the Minoan point of view may be classified as 'L. M. I *c*'. L.M.II?

The interments in this case are marked by diadems and pendants of a much plainer geometrical style than those of the somewhat parallel sepultures of Grave III.

The diadems from Grave I, however, are so identical in style with those from Grave IV (which has associations going back to L. M. I *a*) that we may regard them as contemporary with the ewer of the fine early L. M. I *b* class found in the tomb. This implies a date round about 1500 B.C., while the stylistically later 'L. M. I *c*' vases indicate rather the second half of the fifteenth century as the epoch of their final transference.

The appearance of a group of votive vessels in Grave IV later in date than the relics associated with the original interments is clearly easier to reconcile with a theory of re-internment.

[1] See A. E., *Shaft Graves, &c.*, pp. 16 and 17 and 19, 20, &c.

[2] G. Karo, *Schachtgräber von Mykenai*, *Atlas*, Pl. CLXIX (199).

[3] *Ibid.*, Pl. CLXVII, 190, &c., and see below, p. 292 seqq., and Fig. 227 *a-c*.

The removal of the royal dead from the great *tholoi* having been concluded, the Enceinte wall of the Citadel was here widened out into a capacious bay to protect the remains.

Different character of Sixth Grave: always *in situ*.

As to the fundamental difference in character of the Sixth Grave, *ex hypothesi* early constructed in what had been the old native graveyard, one or two points may be mentioned. It represents a sepulture in a pit-grave of a normal Minoan type. In this case alone we have evidence of hereditary succession, the bones of the first occupant being swept into a corner—a not unusual procedure. The skeleton of the second interment is extended in the regular manner and is in quite a different state of preservation from the huddled remains in the other tombs. It is only here, too, that we see the vessels that were the *peculium* of the dead regularly arranged near the head of the grave. The number of indigenous forms among these, partly taken over, it would seem, from those of the primary burial, itself marks the Age of Settlement.

In the case of other Shaft Graves a certain confusion due to transportation, the signs of haste, the cramped position of the bodies, and evidence of simultaneous interment, all point to the same conclusion.

Transference solution. Explanation already suggested by Prof. Gardner.

On general grounds—when the niceties of Minoan Periods were yet undreamed of—this idea of transference within the walls had already been suggested by Professor Percy Gardner[1] and had independently been put forward by myself.[2]

New materials in support of 'transference' theory.

The various new and convincing evidences—derived from discoveries relating to the 'Middle Palace' at Knossos—for the view that the date of the finest of the Bee-hive Vaults, the Tombs of 'Atreus' and of 'Clytemnestra', in fact corresponds with that of the earliest relics found in the Shaft Graves, and that the transference of the relics at a time of danger to a place of safety subsequently included within the Acropolis wall, have been recently set out in my compendious work on the *Shaft Graves and Bee-hive Tombs of Mycenae and their interrelation.* Parts of this are incorporated in the present Section, and it is gratifying to recall the receipt from Professor Friedrich von Duhn—the 'Grand Old Man' of German archaeology—a few months before his widely lamented death, a letter in which he records his general acceptance of the views stated in that work.

Professor von Duhn's adhesion to this view.

He had taken it up, he there informed me, with strong pre-conceived views in favour of the Bee-hive Tombs being later than the Shaft Graves, as set forth in the volume describing the British School Excavations at

[1] In the *Quarterly Review*, 1887, and *New Chapters in Greek History*, 1892, pp. 76, 78.

[2] In an Ashmolean Lecture: unpublished.

Mycenae.[1] 'But now', he continues, 'having read it through twice, and after examining your views under every aspect, having weighed your reasons and all the surprising parallels put forward, I am highly inclined to believe that you are perfectly right. It seems to me and to other students who have perused it, to be a very important discovery, which reconciles what had appeared to be incompatible phenomena'.[2]

'It is hard to suppose', Professor Gardner wrote, 'that the whole contents of the circle of stones were not placed where they were found on one definite occasion . . . I conceive that on some occasion, when the city of Mycenae was in danger from some invading foe, the people of the city began to fear lest the bodies and treasures of their early kings, buried in the beehive-shaped tombs outside the walls of the citadel, should fall into hostile hands. So they must have removed bodies and treasures alike to a spot within the walls of the Akropolis, thinking that, at least within those mighty walls, safety would be found.'[3] This simple explanation remains the best.

Shaft-Grave Deposits synchronous with Relics found in two Great 'Tholoi'.

Contents of Shaft Graves synchronous with relics found in two great *tholoi*.

It would appear, moreover, that the contents of the Shaft Graves and what traces remain of those of the Beehive Tombs cover precisely the same period of time. Many of the bronze swords and splendid inlaid weapons of the Graves are clearly of M. M. III fabric or of the transitional M. M. III–L. M. I Age,[4] and polychrome pottery was found in the M. M. III style.[5] The lower limit on the other hand is marked by the occurrence of pottery of the mature L. M. I *b* style.[6] On the other hand, the 'Atreus' and 'Clytemnestra' Tombs contained, as we have seen, the remains of a whole series of stone vases of M. M. III fabric.

[1] *B. S. A.*, vol. xxv. Careful as is much of the work in this volume, the conclusions arrived at on nearly all the main points concerned need wholesale revision in view of the Cretan evidence.

[2] It is sad to think, however, that like the favourable verdict of Dr. Hall, expressed in the last number of the *Hellenic Journal*, these words of encouragement should in both cases come from beyond the Dark River.

[3] Gardner, *New Chapters in Greek History*, pp. 77, 78.

[4] See A. E., *Shaft Graves, &c.*, p. 32 seqq. A good example of a M. M. III sword blade is that partly reproduced in *P. of M.*, ii, Pt. II, p. 481, Fig. 288, *b*, with an early form of the 'Sacral Ivy' motive. For Late Minoan swords see below, § 115.

[5] *Shaft Graves, &c.*, pp. 24–6, and cf. *P. of M.*, i, p. 600 and n. 2. Some of this may have been made on the spot; some was certainly imported, including a fragment of a vase in the M. M. III 'tortoise-shell ripple' style.

[6] *Shaft Graves, &c.*, pp. 23, 24, Figs. 12, 13.

It is, moreover, a highly suggestive fact that remains of gold plates and roundels, answering to those found in such abundance in the Shaft Graves and with characteristic curvilinear decoration of a similar character, occurred within the great *tholoi*.

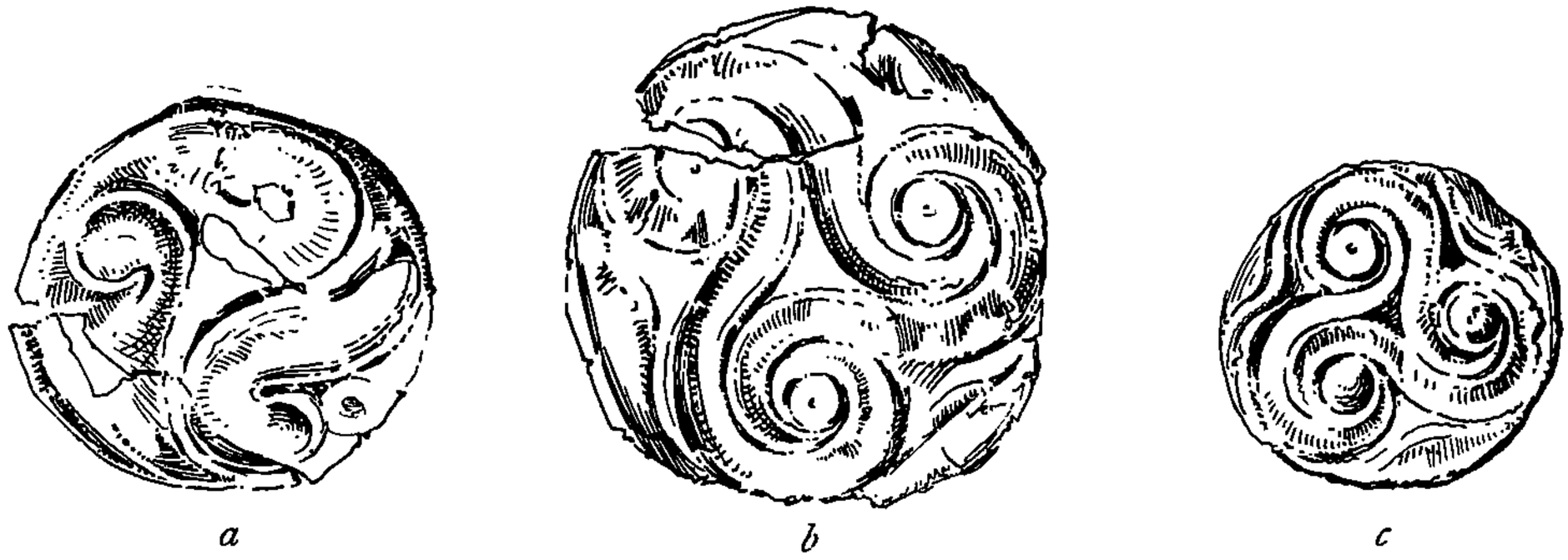


FIG. 182. GOLD EMBOSSED ROUNDELS WITH SIMPLE SCROLLS AND TRIQUETRAS: *a*, FROM 'ATREUS' TOMB; *b*, *c*, 'CLYTEMNESTRA'. ($\frac{2}{1}$).

Embossed gold plates found in *tholoi*, like those in shaft graves.

A small round plate of thin gold (Fig. 182, *a*)[1] found by Stamatakis within the 'Atreus' vault shows a triple **S** pattern in a simple form that recalls the tradition of Early Minoan seal-stones.[2] So, too, in a more developed triquetral form, similar embossed patterns on the disks were also found, in the 'Clytemnestra' Tomb (Fig. 182 *b*, *c*). It must, further, be regarded as a suggestive circumstance that they recur in a practically identical shape on a series of embossed disks from the Fourth Shaft Grave (see Fig. 183, *a*, *b*, *c*).[3] Later in its associations is a fragment of a small gold plate brought out, with others, from the doorway of the 'Atreus' tomb, by the Ephor Stamatakis.[4] and developed for me by Monsieur Gilliéron, fils, in Fig. 184. It formed part of a fine spiral and papyrus pattern of the same class as that which decorated the ceiling of the Orchomenos chamber. From a fragment in painted plaster relief found by the Queen's Megaron at Knossos, it would appear that in its restored shape it was covered by a stucco ceiling of similar design.

The fragment of gold plate and the ceilings of Knossos and Orchomenos show this spiral and papyrus design in its fine early form, also

[1] Drawn by Monsieur Gilliéron, fils, from the original, enlarged 2 diameters. Cf. Wace, *op. cit.*, p. 354, Fig. 74, *g*.

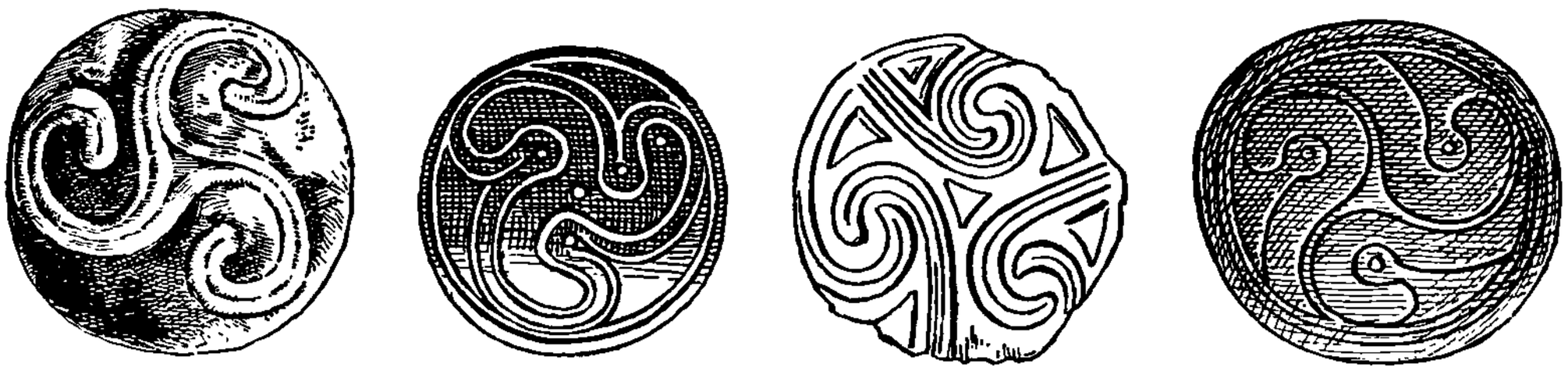
[2] See above, cf. *P. of M.*, ii, Pt. I, pp. 196, 197, and Figs. 105–7. More developed forms of these **S** patterns are engraved on some of the ivory disks from the *tholos* at Old Pylos illustrated by K. Müller, *Ath. Mitth.*, xxiv, p. 285, Figs. 7, 8.

[3] E. g. Schliemann, *Mycenae*, p. 265, no. 409.

[4] Wace, *B. S. A.*, xxv, p. 334, Fig. 74 *d*.

illustrated by Eighteenth-Dynasty Egyptian examples. On the Tiryns frieze[1] it appears in a form closely dependent on that of the Knossos Megaron.

We have here the evidence of a relic of an intermediate epoch, answering



a *b* *c* *d*

FIG. 183. TRIPLE 'POT-HOOKS' AND TRIQUETRAL DESIGNS: *a*, *b*, *c* ON GOLD DISKS, MYCENAE; *d*, MINOAN SEAL.

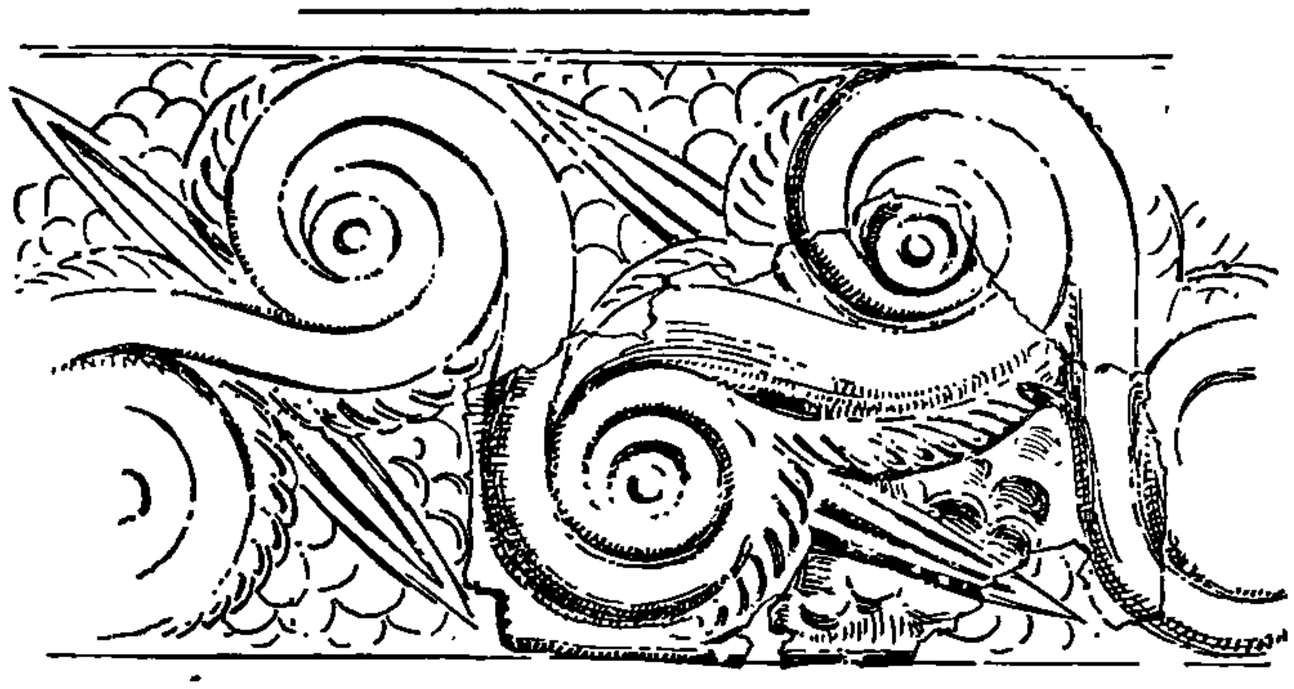


FIG. 184. GOLD PLATE WITH EMBOSSED DESIGN OF SPIRALS AND PAPYRUS. RESTORED BY MONSIEUR E. GILLIÉRON, FILS: ABOUT 2 DIAMETERS.

apparently to the mature L. M. I *a* phase, from its original place of deposit.

Latest of the continuous ceramic relics in *tholoi* and Shaft Graves—L. M. I *b*.

The lower limits of the continuous use of these two *tholoi* cannot be ascertained from the confused data preserved, but as a general rule it appears that wherever, either at Mycenae itself or in the case of other bee-hive tombs of the Morea, such as those of Vapheio,[2] the Messenian Pylos[3] or that of Nestor (Kakovatos)[4], the last pottery of the continuous series of interments belongs to the same late L. M. I *b* stage, including also those here classed as *c* and

[1] Schliemann, *Tiryns*, Pl. V, pp. 298, 299; Rodenwaldt, *Fries des Megarons*, Pl. VII and p. 43 seqq. Dr. Rodenwaldt rightly recognized the close relationship of the Tirynthian design with that of the Knossian fragment reproduced by him, *op. cit.*, p. 45, Fig. 14.

[2] Tsountas, Ἐφ. Ἀρχ., 1889, Pl. VII, 17; Bosanquet, *J. H. S.*, xxiv (1904), Pl. XI and p. 317 seqq.

[3] See K. Kuroniotes, Ἐφ. Ἀρχ., 1914, p. 114, Figs. 25, 26. In p. 104 seqq. are given a series of specimens of L. M. III *b* pottery, mostly of 'Metope Style' that appear here *per saltum* and belong to a later stratigraphic horizon.

[4] K. Müller, *Ath. Mitth.*, 1909, Pl. XVI seqq.

corresponding with the latest vases found in the Shaft Graves. In the 'Aegisthos' Tomb at Mycenae,[1] while some painted fragments of the L. M. I *a* class were found and one or two of M. M. III fabric, the great mass of the fragments belonged to the L. M. I *b* style, their whole facies recalling the fine 'amphoras' of Kakovatos, while other sherds showed double axes in their derivative L. M. I *c* shape.[2]

Later occupation of *tholoi* in L. M. III *b*.

After this—*longo intervallo*—appear sherds of L. M. III *b* date, according to the Cretan classification, including the 'corkscrew' type of whorl-shell and fragments with the 'metope' pattern. These latter supply parallels to the sherd of this class found beneath the broken threshold of the 'Atreus' Tomb and to the abundant L. M. III *b* pottery in its restored *dromos*. It looks as if, so far as this great group of bee-hive tombs, extended across the Peloponnese, were concerned, there had been some general break soon after the close of the Cretan L. M. I *b* Period, followed by a long interval of desertion. That the remains found in the Shaft Graves should cease at the same epoch looks as if the whole was the result of some widespread catastrophe, the consequence of which in the case of Mycenae was the removal of the royal dead with their relics for security's sake to the old cemetery of the Acropolis border, henceforward to be included within the walls.

Stelae originally placed under Vaults as well as in the open.

Stelae placed within rock tombs: at Mycenae.

Against this conclusion the discovery above the Shaft Graves of grave-stones or their remains, some of them coeval with their earliest contents, is not itself an argument. Sufficient evidence exists that such *stelae* were erected above grave-pits under vaults as well as those in the open.

An example of a tombstone placed within a chamber tomb cut in the rock had long since been afforded by the well-known painted *stela* from Mycenae.[3] This was found by Tsountas in the later walling that blocked the entrance to a small niche in the inner rock-wall of the chamber, which itself was of circular form.[4] It is highly probable that it had originally stood above a small burial pit in the main chamber, containing human

[1] Wace, *B. S. A.*, p. 312 seqq. (pottery from the *tholos*), L. M. I *b* appears there as 'Late Helladic II'. Thanks to the kindness of Professor Droop, I have before me his full notes and sketches of the pottery found in the 'Aegisthos' Tomb.

[2] Bivalve-like double-axe blades appear with two wavy stalks above and below.

[3] For this and the succeeding examples see also my *Shaft Graves, &c.*, pp. 61–3 here repeated.

[4] Ἐφ. Ἀρχ., 1896, pp. 2–22, and Plates 1 and 2.

bones and some painted vessels belonging to the latest Mycenaean epoch. The *stela* itself, consisting of a kind of sandstone, identical with that of one of those from the Shaft Graves, is of special interest as having been used in two very different periods. The stone was originally sculptured, and its face when exposed shows two upper compartments with engraved disks.[1] In its later phase it was covered with a thin layer of plaster about 3 millimetres thick, divided into zones of painted designs, the most important of which depicts a row of helmeted warriors armed with round shields and spears, and almost identical in style and costume with the figures on the 'Warrior Vase'. It may indeed be taken to have served again for the grave as re-used to contain the remains of the later occupants to whom the Late Mycenaean vases belonged. A double-axe motive is repeated on the sides.

Two other slabs were found in the entrance to the tomb, though they cannot be regarded as parts of its regular blocking. One of these was plain, the other showed incised decoration consisting of curves and chevrons. These *stelae* were of the same kind of sandstone as that above described.

Stelae of Dendrà cenotaph.

In the rectangular chamber at Dendrà near Midea—rightly regarded by Professor Persson as a cenotaph[2]—two *stelae* were set near the right wall, facing a table for offerings, while at the back of the tomb was a hearth and a sacrificial platform. It was thus a house of the dead; but there was no trace of interment. The *stelae* here were rude menhirs of oblong shape and with more or less rectangular projections above—like those of some Trojan 'idols'—representing the heads.[3] In this case the upright slabs—as, in their origin, no doubt, all gravestones—stood for the departed themselves and supplied material dwelling-places for their ghosts.

Stelae in *tholos* near Heraeon.

That *stelae* were also connected with sepulchral vaults of the bee-hive class is shown by the discovery of remains of such in the interior of the *tholos* near the Argive Heraeon at the time of its exploration. Together with remains due to the falling in of the vault, there came to light a fragment of a slab of dark stone, 90 centimetres high and 40 cm. broad and thick.[4] The explorer of this chamber supposed that there had been some

[1] Tsountas, Ἀνασκαφαὶ τάφων ἐν Μυκήναις, Ἐφ. Ἀρχ., 1888, pp. 127, 128, Figs. 4, 4 *a*. Cf., too, Tsountas and Manatt, *Mycenaean Age*, p. 152, and Fig. 53.

[2] A. W. Persson, *Kungagraven i Dendrá, Goldfynd och andra fynd från Utgrävningarna*, 1926 och 1927 (Stockholm, 1928), p. 135 seqq.

[3] *Op. cit.*, p. 147 (Figure). Surface borings are visible at intervals, such as often appear on menhirs for the purpose of anointing.

[4] It had a piece of lead adhering to its upper surface, where it was damaged, which indicated that another block had been attached to it or a breakage mended.

stone platform on the top of the *tholos*, upon which *stelae* were set.[1] But it is more probable that in this case, too, the grave-stones had been set up on the floor of the vault, where their individual relationship to the interments would be clearly marked. The evidence of careful socketing in a stone base itself illustrates Schliemann's observations regarding the tomb-stone found over the Third Shaft Grave.

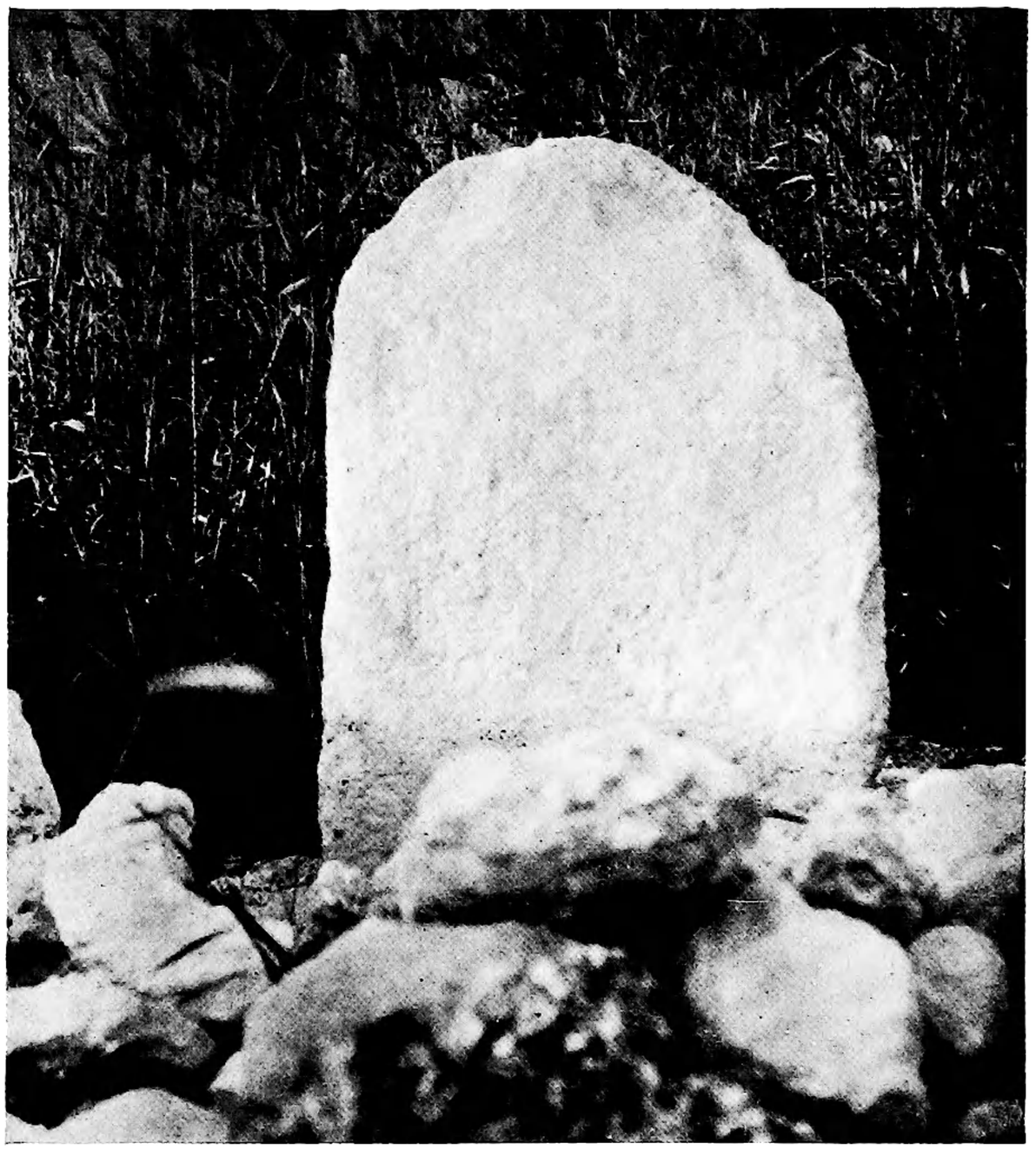


FIG. 185. STELA FROM CHAMBER TOMB IV, MAVRO SPELIO, KNOSSOS, WITH MARK OF THE LEVEL TO WHICH IT HAD BEEN INSERTED BELOW.

Stela in Knossian chamber tomb, Mavro Spelio.

A good instance in point has now been supplied by the early cemetery of Mavro Spelio at Knossos, that lies on the height beyond the Kairatos, the large rock-chambers of which, though they continued in use to L.M. III, in all cases seem to have gone back well into the Middle Minoan Age. Here Mr. E. J. Forsdyke, in the course of his excavation of Tomb IV, came across the limestone slab, about 3 feet high, shown in Fig. 185,[2] in which we must surely recognize a sepulchral *stela*.[3] Although its upper curve is but rudely fashioned, its lower part, as we shall see, was definitely shaped with a view to fixing it in an upright position. The fore-part of this tomb had been destroyed, and the slab lay in the left-hand compartment of the back of the vault. There can be no question, therefore, of its having been part of the door-blocking, the entrance itself having long disappeared, and indeed such blockings always consist of comparatively small rough stones. There were no deep pits

[1] Stamatakis, Περὶ τοῦ παρὰ τὸ Ἡραῖον καθαρισθέντος τάφου (*Ath. Mitth.*, 1878, p. 271 seqq.).

[2] E. J. Forsdyke, *The Mavro Spelio Cemetery at Knossos* (*B. S. A.*, xxviii, p. 243 seqq.; see p. 248, and p. 255, Fig. 7).

[3] The lower section of the slab is somewhat obscured in Fig. 185 by the blocks used to fix it in an upright position for my photograph.

in this tomb, but it may have stood beside some clay coffin placed on the floor. It lay below the stratum in which remains of L. M. III *larnakes* occurred, and in the opinion of the excavator belonged to the M. M. III level.[1] Although the surface of the stone had not preserved any traces of coloured design, we may well believe that it had once been painted.

That the *stela* had been set upright in the ground appears from an interesting feature in the slab itself. At about a foot from the ground, as is clearly shown in the phototype (Fig. 185), the surface of the stone shows a horizontal line, marking the level up to which it had been originally inserted in the floor of the vault.

There is nothing therefore to exclude the possibility that the grave *stelae* of Mycenae originally found their place beneath the great vaults. If —as those accustomed to a Minoan atmosphere can hardly doubt—they had been originally adorned with bright colouring, this protected situation would have been more favourable to them. Where their surface was plain and smooth, this sheltered situation would have been more favourable for preserving such painted records. The matter, however, is not essential to the present argument and it is quite possible that *stelae* were set up before or above the great *Tholoi*.

Reliefs on *Stelae* of Mycenae of Knossian Lapidary School. Influence of Seal-types.

Like the 'metope' of the façade of the 'Atreus' Tomb, the reliefs of the gypsum slabs brought by Lord Elgin from its fore-hall, and the steatite 'medallion' *pithoi* from the 'Clytemnestra' Tomb, as well as the other stone-work vessels and fragments associated with these sepulchral vaults, the decorative elements of the relief on the Grave *stelae* themselves take us once more to the lapidary School of Knossos.

The Grave *stelae*[2] of Mycenae seem to have been, for the most part at least, sculptured by craftsmen whose ordinary work was connected with the goldsmith's art, and who—though skilful enough in their reproduction

[1] These supplementary details have been kindly supplied to me by Mr. Forsdyke.

[2] The *stelae* were first separately treated by W. Reichel, *Die mykenischen Grabstelen*, in *Eranos Vindobonensis*, p. 24 seqq. A fresh examination of the material was undertaken by Dr. Kurt Müller in his *Frühmykenische Reliefs* (*Jahrbuch d. Arch. Inst.*, xxx; see p. 286 seqq.). The whole material has since been carefully collected and arranged by Mr. W. A. Heurtley in *B. S. A.*, xxv, p. 126 seqq., and Plates XIX–XXI. To this must now be added the excellent photographic reproductions of the *stelae* in Prof. G. Karo's publication, *Die Schachtgräber von Mykenai* (Munich, 1930, Plates V–X).

Minoan seal-types taken over on to *stelae*.

of border patterns taken directly from the ornamental designs—show a great unevenness in their execution of figured reliefs. The spiraliform motives here represented—apart from those belonging in a more general way to the Cretan and Aegean class in its wider sense—specifically belong, as I have elsewhere demonstrated in detail, to an 'Egypto-Minoan' class. Especially instructive in this connexion is the pattern formed of eight C-scrolls linked within a circle seen on Stela VI, which, as shown below, is literally taken over from a Cretan type, of M. M. III date, found on clay sealings both at Zakro and in the Harbour Town of Knossos (Fig. 186).

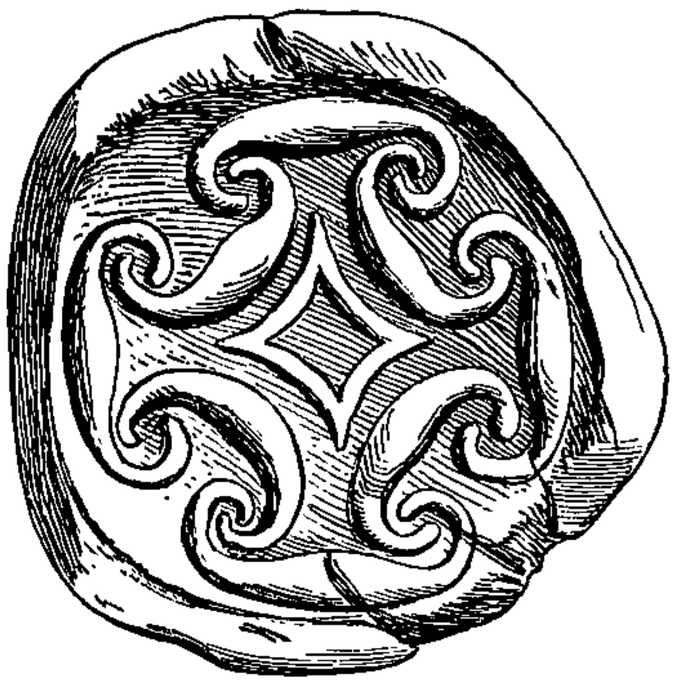


FIG. 186. CLAY SEAL-IMPRESSION FROM HARBOUR TOWN, KNOSSOS. CF. FIG. 187 *p*, ZAKRO AND FIG. 188 *a*.

Connexion with Twelfth Dynasty scarab types—'Egypto-Minoan' patterns.

A table showing Twelfth and Thirteenth Dynasty Egyptian examples as seen on scarabs compared with others supplied by Minoan decorative patterns is here reproduced,[1] in Fig. 187, and is of particular value in its bearing on similar designs that appear on the Mycenae *stelae*. An interesting point in these comparisons is that, though taken over onto larger monumental art, and reproduced both in painting and sculpture, these patterns belong in their original stage essentially to the sphragistic field. In conformity with this, the Egyptian quatrefoil motive, borrowed in the case of *f* from a sealing on a Kahun papyrus, takes the oval outline adapted to the scarab shape. On the Cretan specimens, *o*, *p*, on the other hand, we see round types answering to the Minoan seals. The impression *p*, copied from a Zakro sealing, which also reappears on the clay seal-impression found in the Harbour Town of Knossos (Fig. 186), has in this connexion a special interest. Except for the lozenge inserted in its centre it will be seen to be identical with a sculptured pattern inserted in the border of Stela VI at Mycenae (Fig. 188, *a*), the resemblance, indeed, being so striking that we must infer a direct dependence on a M. M. III seal-type. Fig. 188, *b*, shows a similar affinity to that seen in Fig. 187, *k*, illustrated by a fresco fragment from Knossos, of earlier date.

Thus the patterns on the Stela No. 6, given in Fig. 187, tell their own tale.

When tracing the origin of ornamental groups found on similar objects,

[1] See *P. of M.*, ii, Pt. I, pp. 199–202, and Figs. 110 A and 110 B, and *Shaft Graves, &c.*, p. 51, Fig. 39 from which this part of the text is repeated.

the principle '*noscitur a sociis*' will be found as useful a guide as in other cases. Where, then, we are able definitely to assign certain special motives

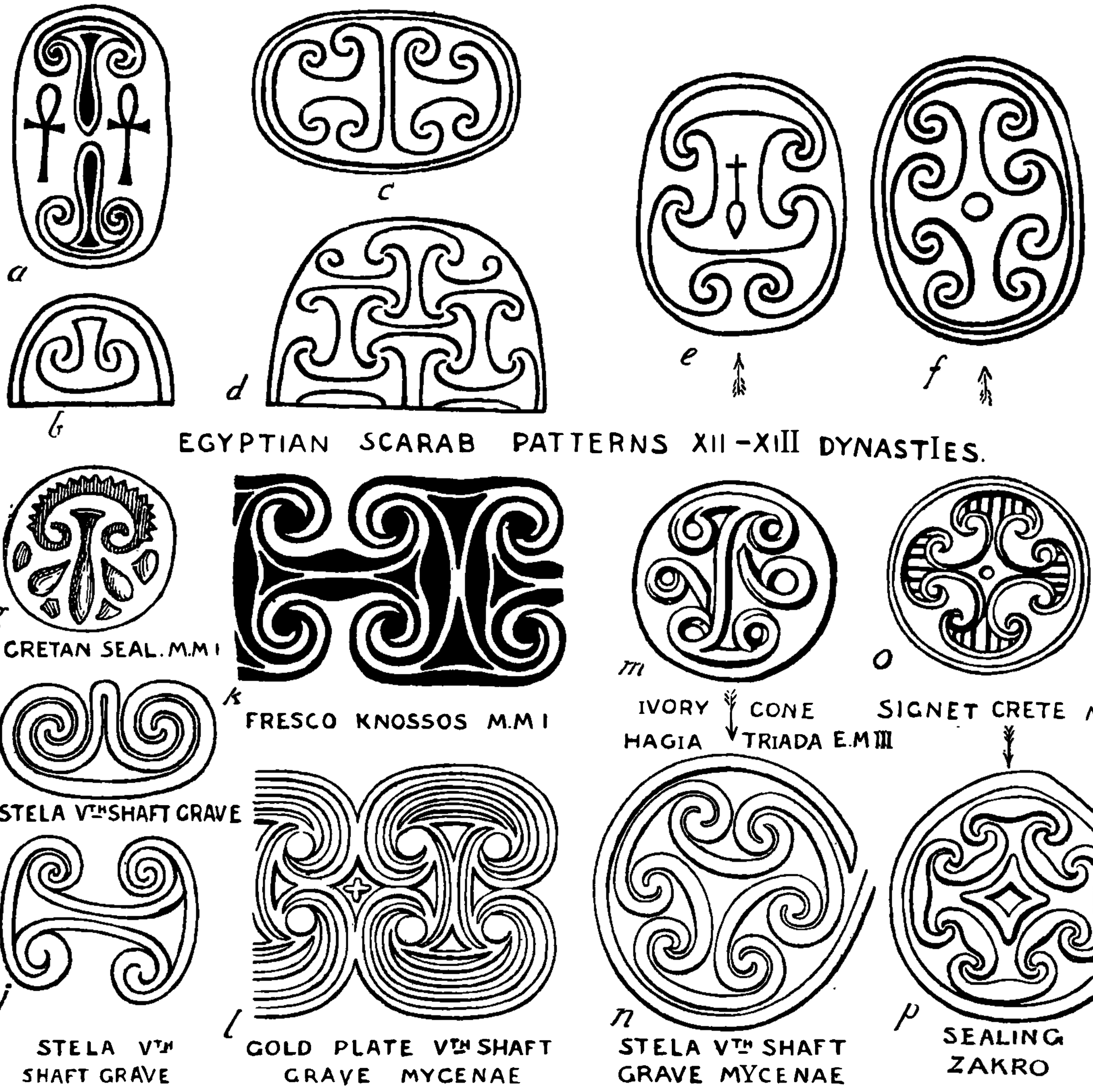
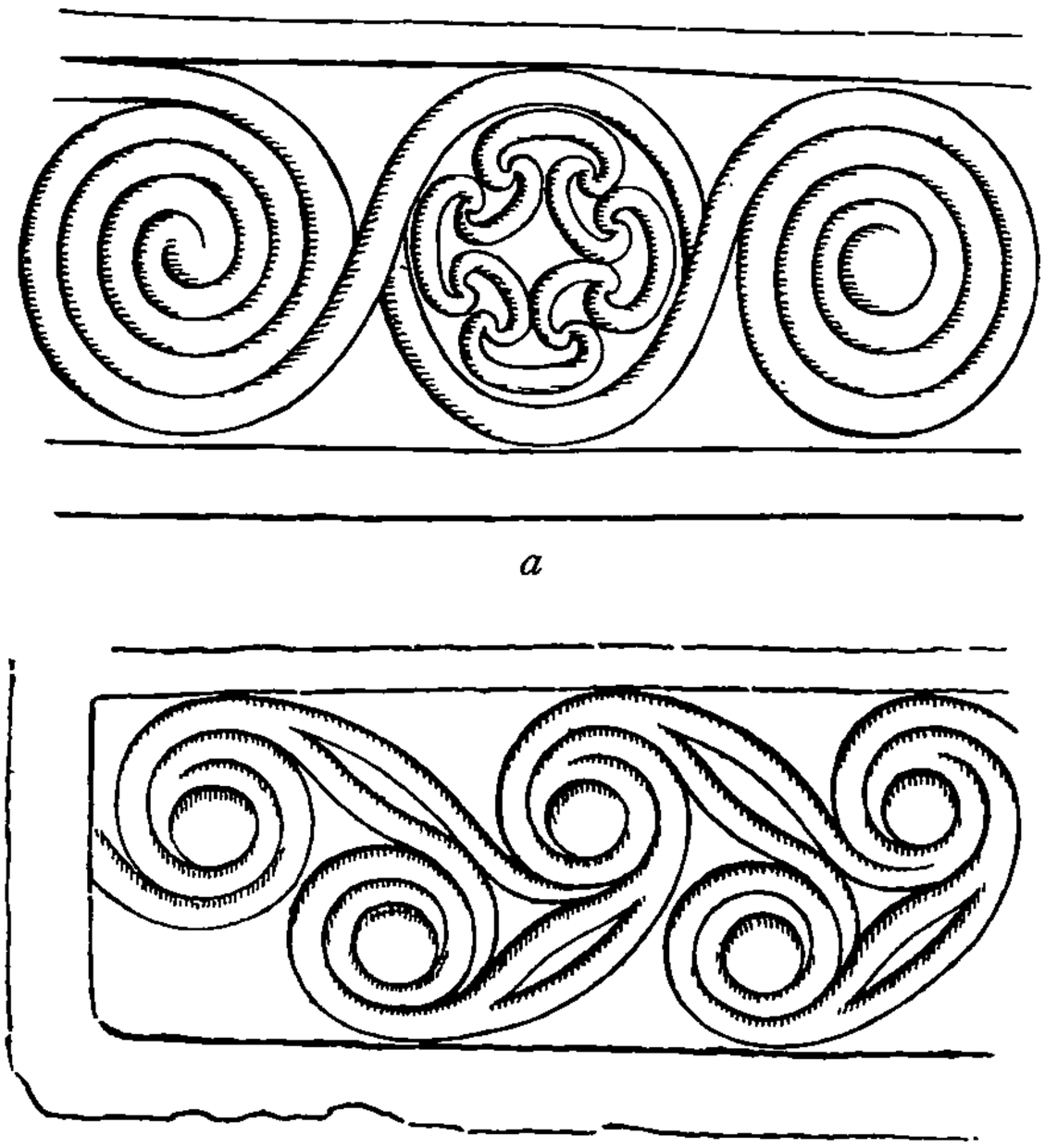


FIG. 187. 'EGYPTO-MINOAN' DECORATIVE SCROLLS AND THEIR REACTION AT MYCENAE.

among the spiraliform elements of the Mycenae gravestones to this 'Egypto-Minoan' family, a strong presumption arises that other simpler ingredients met with in the same connexion belong to the same category, although they themselves may be of a less specialized kind, and in themselves capable of having been taken from a much wider circle of similar forms. It is an undoubted fact that the 'Egypto-Minoan' group illustrated by the Table of Fig. 187 is itself to a large extent allied to a wider ornamental province,

extending to the North and North-East of the Aegean. The spiral system itself, though deeply rooted in the Cyclades, is quite exceptional amongst Early[1] and even Middle Helladic remains, and, on the face of it, it does not seem probable that a lapidary sculptor, working amidst thoroughly Minoized surroundings, should have taken one part of his decorative motive from these, and sought the others in some vague indigenous non-Minoan source.[2]



a

b

FIG. 188. *a*, SEAL PATTERN (C-SCROLLS) ON STELA VI, AT MYCENAE; *b*, RUNNING PATTERN ON SAME STELA.

Features of M. M. III 'Marine' Style taken over on Stela of Shaft Grave V.

Of special interest in its relation to the 'marine' style of the M. M. III Palace is the *stela*, Fig. 189, found above the Fifth Shaft Grave.[3] The main personal theme here is of a martial kind. A man in a chariot with a triangular dirk slung by his side and holding a long spear, seems to have overthrown another warrior wearing a crested helmet, who lies beneath the legs of the galloping horse. The chariot itself is of a characteristic Minoan form. The pole that runs up from the front of the chariot floor is linked to the upper part of its breastwork[4] and its recurved end is seen behind the near horse's neck. A part of the girth is also visible and the loop of the knotted cord by which it was fastened to the yoke. The fallen warrior lies, apparently,

[1] Incised spiraliform decoration appears on part of the rim of a *pithos* from Zygouries (C. Blegen, *Zygouries*, p. 121, Fig. 114, 6). As Dr. Blegen remarks (p. 122): 'the spiral is, to say the least, exceedingly rare among the decorative motives of the Early Helladic Period'.

[2] This is what seems to be intended by Dr. K. Müller's 'alteinheimische Dekorationskunst' (*Frühmykenische Reliefs*, p. 288).

[3] This figure is taken from an original photograph of Schliemann's.

[4] The point of attachment, however, seems here to be near the horses' hind-quarters, unlike the Later Minoan arrangement.

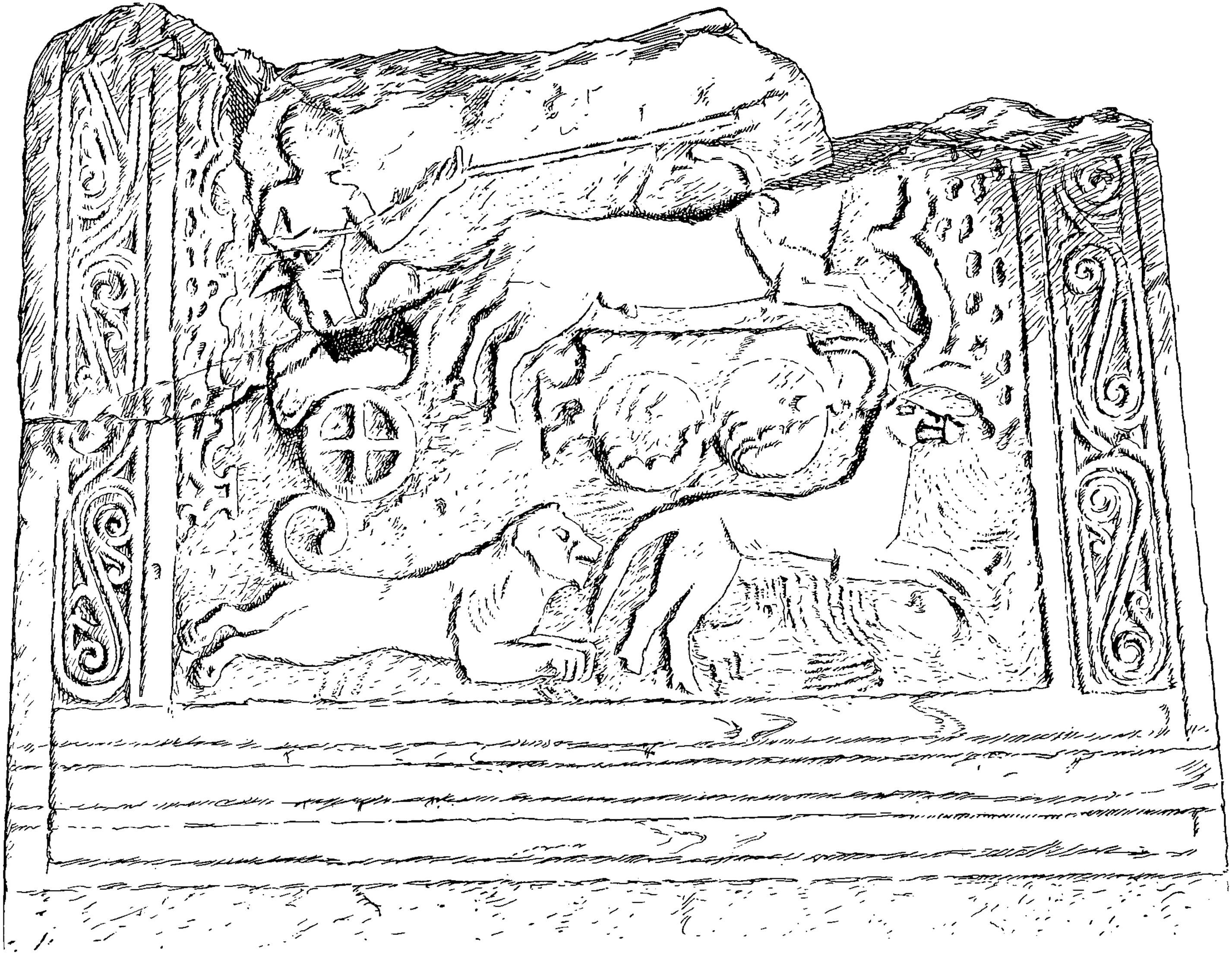


FIG. 189. LATER STELA FROM SHAFT GRAVE V, SHOWING M. M. III ROCK-WORK BORDER TO FIELD.

with his head turned towards the lower margin of the field,[1] and is covered by an 8-shaped shield, the traces of conventional patches on which show that it was covered with bull's hide. The straight line down his back may best be interpreted as the border of a long mantle, or perhaps a plaid, which was certainly an article of Minoan attire. From the typical shield and crested helm we may perhaps infer that the victory here recorded was gained over some other member of the conquering race.

The feat of arms here depicted is emphasized below by a lion pursuing his quarry. This allusive glorification of the warrior prince 'as a young lion roaring on his prey'[2] is curiously suggestive both of the imagery and of the 'parallel' style of Hebrew poetry.

Features of M. M. III 'marine' style taken over on to *stelae*.

Specially interesting features of this relief, in the present connexion, are the irregularly outlined designs behind and before the chariot scene, in the latter case with granular marking within. These designs might be regarded as in a general way representative of rocky landscape—not very favourable, it might be thought, for hunting in a chariot! But the more precise comparisons now at our disposal show the real source of the filling-in motive to which the artist here has had recourse. It is in fact a convention taken over, without any consideration of appropriateness,[3] from what may be called the 'marine cycle' of Middle Minoan wall-painting and reliefs. What we see behind are the conventional rocks of the sea margin[4] and the granular marking within the cusped outline in front is a further indication of a pebbly shore. This dual delineation in fact recurs on the remarkable M. M. III burial-jar from Pachyammos, with swimming dolphins in the intervening space.

In this relief, too, the imperfection of the sculpture of the figured designs contrasts, as in other cases, with the comparative success attained in the decorative border. The recurring **S**-shaped motives here represent one of the earliest Minoan seal patterns, and their excrescences, suggestive of leaves and buds, are found in the same connexion.[5] They are akin to the tendrils which otherwise take their place,[6] and both types are illustrated by the gold

[1] This, too, is also Dr. Kurt Müller's view, *Frühmykenische Reliefs*, *Jahrb. d. Arch. Inst.*, 1915, p. 287. The crest of the helmet falling down to the neck is also correctly recognized.

[2] Isaiah xxxi. 4.

[3] The conventional imitation of rocks, indeed, is also applied to landscape. But the double excrescences seen in the version shown on the right of this *stela* have a distinctly marine association. In their completer form they represent coralline or seaweed.

[4] Rocks by themselves are also used for land scenery, as in the case of the 'Saffron-Gatherer' Fresco.

[5] Cf. *P. of M.*, ii, Pt. I, p. 197, Fig. 106, *b*, *c*.

[6] *Ibid.*, p. 196, Fig. 105. Dr. Kurt Müller,

Gold-smiths as stone carvers.

plaques from the Shaft Graves themselves. These decorative borders betray once more the hand of a goldsmith or of a seal engraver, whose services had been enlisted for work on the larger material. The marine motives here seen may have been taken over from some small relief on an imported stone vase and need not have been copied directly from frescoes on the Palace walls. We seem to have here the work of a Minoan lapidary working on the Mainland site.

Spirali-form patterns on early *stela* taken from Egypto-Minoan repertory of Knos-sos.

On the *stela*, Fig. 190 [1], also found above Grave V, the chariot is much more imperfectly sketched than on Fig. 189, and the horse's tail seems to be a compromise with a lion's. The blade of the sword held by the charioteer is of an acute triangular form, resembling one with gold plated studs found within the Grave itself. It still preserves a M. M. II type, representing indeed a development of one of the earlier M. M. II phase, found in the smaller *tholos* of Hagia Triada. The form of the weapon held by the man in front of the horse also seems to be Minoan.[2]

Here again the rude drawing of the figured subjects contrasts with the comparatively neat work of the purely decorative parts of the designs—and we may once more recognize the handiwork of a craftsman more accustomed to goldsmith's work.

Repoussé patterns on Mycenae casket: also Minoan.

It suggests a jeweller whose chief interest lay in the ornamental side of his productions. The contrast here visible recalls indeed that seen in the case of the small relief on the gold plates of the two hexagonal wooden caskets found in the Grave.[3] On these the sides, showing finely embossed linked spirals, are coupled with others with lions hunting stags, in a crudely decorative style. None the less every characteristic feature, both in the style and the design, is of pure Minoan origin. We see the typical 'flying gallop', the foliage and shoots of palms copied from Cretan models, and a large bull's head inserted quite gratuitously in the background, just

in discussing the decorative designs on this *stela* (*Jahrbuch d. Arch. Inst.* (xxx), 1915, pp. 287, 288), regards them as due to naturalistic Minoan influence acting on the old geometric spiraliform motive of indigenous (Mainland) origin. In view of the early sphragistic evidence now before us, however, it is clear that these motives came over, ready-made, from Minoan Crete.

[1] The design is in this case again traced from Schliemann's original photograph. An excellent photographic reproduction is given by Karo, *Schachtgräber*, Pl. V.

[2] See A. E., *Shaft Graves, &c.*, p. 54. It also answers to Schliemann's *Mycenae*, p. 279, Fig. 442.

[3] Schuchhardt, *Schliemann's Excavations*, pp. 250–2, and Figs. 260–2: K. Müller, *Frühmykenische Reliefs* (*Jahrb. d. k. d. Inst.*, xxx), pp. 295–8. The caskets and their repoussé plates are now beautifully reproduced in Karo, *Schachtgräber*, Plates CXLIII, CLXIV.

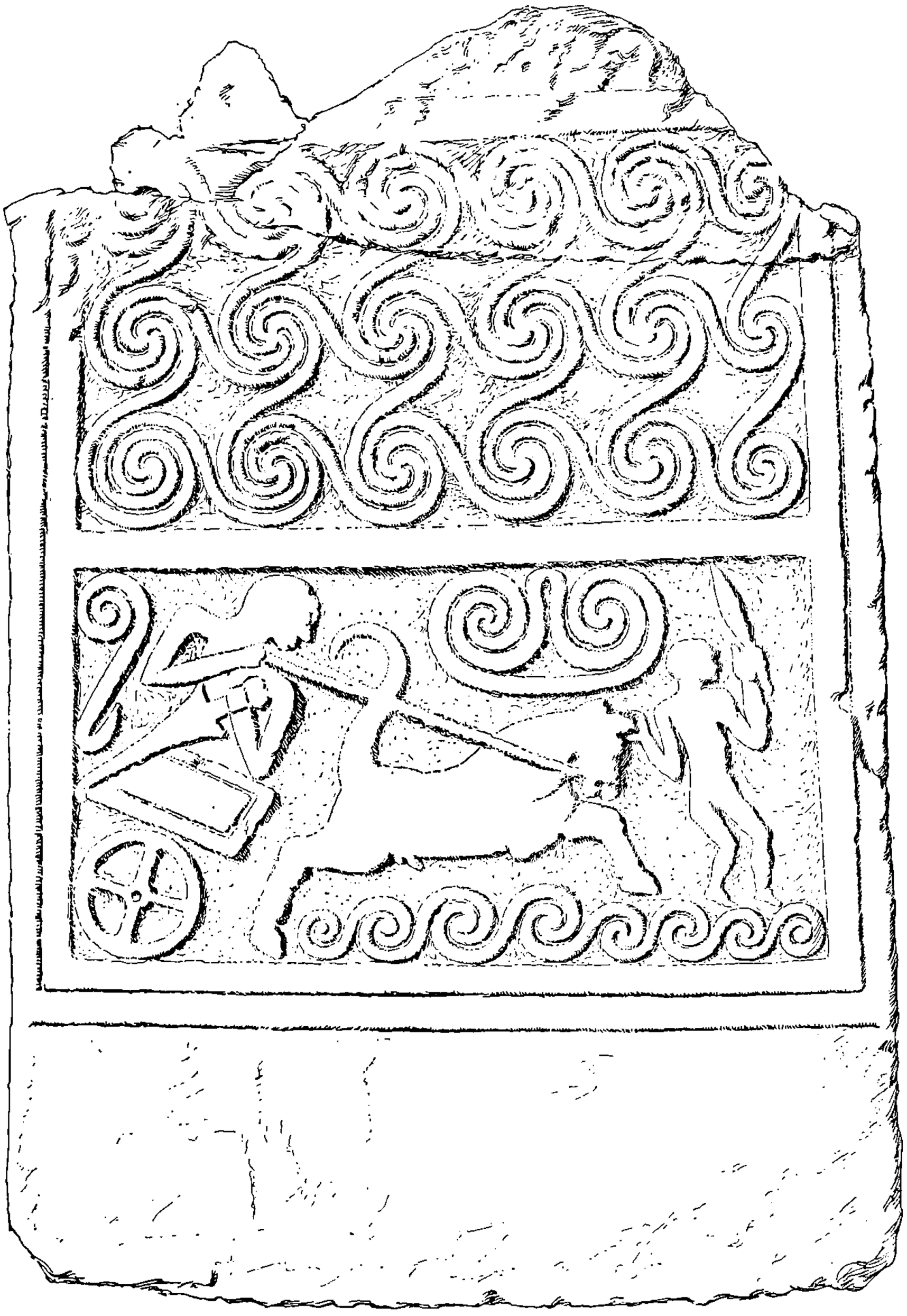


FIG. 190. EARLIER *STELA* FROM GRAVE V, MYCENAE.

as we see incongruous animals' heads used to fill up vacant spaces on Minoan seals. The symmetrical series of curved lines on the deer's antlers preserve a peculiarity of these as rendered on M. M. II intaglios.[1]

Decorative reliefs on early *stela*: 'Egypto-Minoan' comparisons.

The main ornamental feature on the *stela* consists of interlocked spirals, three rows of which occupied the upper panel. The pendant double spiral below with a central loop, which is reproduced separately in Fig. 187, *h*, is really, as shown in the Table, a simple decorative equivalent of the 'canopied ankh' series of the Egypto-Minoan group. The closely allied motive, Fig. 187, *l*, recurs on gold bands found within the Grave itself.[2] It also appears on a fragment of another Grave-stone of which a restored drawing is given by Mr. Heurtley,[3] and it is found again on a steatite pot that came to light, as an intrusive element, among L.M. I *a* vases from a tomb in Cerigo, itself probably of early Middle Minoan date.[4] The drawing of the scene below is exceptionally rude, contrasting with the comparatively neat work of the purely decorative part of the *stela*—we may recognize here, indeed, with great probability the work of a goldsmith set to execute a figured design in stone relief. The short sword held by the charioteer, as already noted, is of the early dagger-like type, and the long knife wielded by the apparently naked man in front also resembles a Cretan form. The contrast between the ornamental and figured elements of the design closely recalls the embossed plates belonging to two hexagonal caskets from this Grave.

Enough will probably have been said to show that, where the spiral and allied curvilinear system appears on the *stelae* and embossed plates of Mycenae, even in a simple form, it cannot be separated from other more distinctive features of the system, and that these belong in fact to a Cretan class traceable from the M. M. I Period onwards. This class, as shown above—though it includes curvilinear forms of the C and S type and the simple spiral, itself of Early Minoan inheritance—is itself so interfused with elements of Egyptian Middle Kingdom origin that it has been convenient to apply to it the general term of 'Egypto-Minoan'.

Connected rows of interlocked spirals recur, as is well known, over a wide primitive area North of the Aegean. It is no longer permissible,

[1] E.g. *P. of M.*, i, p. 275, Fig. 204 *q*. Compare, too, the forepart of the hunted wild goat with *ibid.*, Fig. 204 *s*. All this to Dr. Müller, is 'alteinheimisch', rather than of Minoan derivation.

[2] Schliemann, *Mycenae*, p. 326, no. 514 seqq.

[3] W. A. Heurtley, *The Grave Stelae of Mycenae* (*B. S. A.*, xxvi), p. 139, Fig. 32, *a* and *aa*.

[4] See *P. of M.*, ii, Pt. I, p. 199, and p. 208, Fig. 117 B. For the find see V. Stais, Ἀρχ. Δελτ., i, p. 192, and Fig. 1 (somewhat defective).

however, to pick out examples of the Mycenae group, such as that supplied by the *stela* shown in Fig. 190, and connect them with some mysterious wave of 'Northern' influence. The principle already invoked, '*noscitur a sociis*', must again be applied in this case. Every single pattern with which these spirals, alike on the gold plates and Grave *stelae*, are associated is, in fact, of traditional Minoan derivation.

Discovery of Sculptured Slabs at Knossos with Similar Reliefs of Interlocked Rows of Spirals.

At Knossos connected rows of interlocked spirals are already a characteristic feature in M. M. III fresco decorations.[1] On painted vases again this type of ornament is frequent in the transitional M. M. III and L. M. I *a* ceramic phase.[2] A remarkable discovery made near the South-Western angle of the Palace site has now supplied the evidence of a sculptured slab with reliefs presenting the nearest existing parallel to the spiraliform panel of the *stela* from Mycenae illustrated in Fig. 190.

The find, consisting of two fragments of a limestone slab, was made in the unstratified filling of a well about 21 metres West of the North-West corner of the 'Theatral Area', and the slope above this makes it probable that, like the small altar found some 12 metres from this in a Southerly direction, the slab itself had been connected with some structure of the neighbouring Palace angle.

One of these fragments is shown in Fig. 191 *a*. Its extreme width is 27·4 centimetres and the height 30 centimetres; its mean thickness being about 9 cm. Here we see a sunken horizontal band with a double row of interlocked spirals in relief 10·5 centimetres broad. Above this, within a corner of an upper compartment (as here arranged), is a rosette originally eight centimetres in diameter with eight petals. There is further a trace of the continuation upwards of the double spiral band, enclosing thus the panel containing the rosettes.

Flat relief of rounded shaft on slab: compared with baetylic example in 'Tomb of Double Axes'.

The other fragment (Fig. 191, *b*) shows parts of what is evidently a spiral band similar to that of Fig. 191 *a*. As, moreover, it was found in the same deposit, we may infer that it originally formed part of the same slab as the other, though it is not easy to define the relation of the two fragments. The section preserved is about 30 centimetres wide, as shown, and its

[1] E. g. the painted stucco band found in a M. M. III *a* stratum above the 'Loom-weight Basement', *P. of M.*, i, p. 371, Fig. 269.

[2] For a good L. M. I *a* example see the painted jar from the North-East House, *P. of M.*, ii, Pt. II, p. 423, Fig. 245.

extreme height 20 cm. Its remarkable feature is what appears to be a part of a round column in very flat relief on its right extremity.

FIG. 191 *a*. FRAGMENT OF SCULPTURED SLAB FROM KNOSSOS, WITH SPIRALS AND ROSETTE.

Shaft in low relief.

Here the appearance of a shaft of such a kind in a slightly sunken space in the field suggests a comparison with the slightly rounded pillar set in a similar way in the central pier of the Tomb of the Double Axes at Isopata.[1] The religious character of the relief in that case is undoubted. Vessels of offering and objects of cult, including a bull's-head rhyton and bronze Double Axes of the ritual type, were found in front and on the ledge to the right of it, where was also the cist containing the remains of a departed warrior. It may have represented the departed himself in

[1] A. E., *Tomb of the Double Axes, &c.* (*Archaeologia*, lxv), p. 33 seqq., and Figs. 49 and 52.

Baetylic pillar in Tomb of Double Axes compared.

baetylic form or, more probably, the pillar form of the Goddess whose sacred emblems were found near it.

As seen on the sculptured slab before us, the suggestion of a similar pillar may at least be taken as an indication that it had a similar religious significance. There is not sufficient evidence that the fragments before us actually formed part of a sepulchral *stela*. They may, indeed, have belonged to the façade of some sanctuary structure. The character of the double spiral band in any case supplies a real parallel to the similar feature on the Mycenae Grave-stone, and we are taken directly to Knossos as the home of this type of lapidary decoration, though both it and the rosette may well be of somewhat later date.

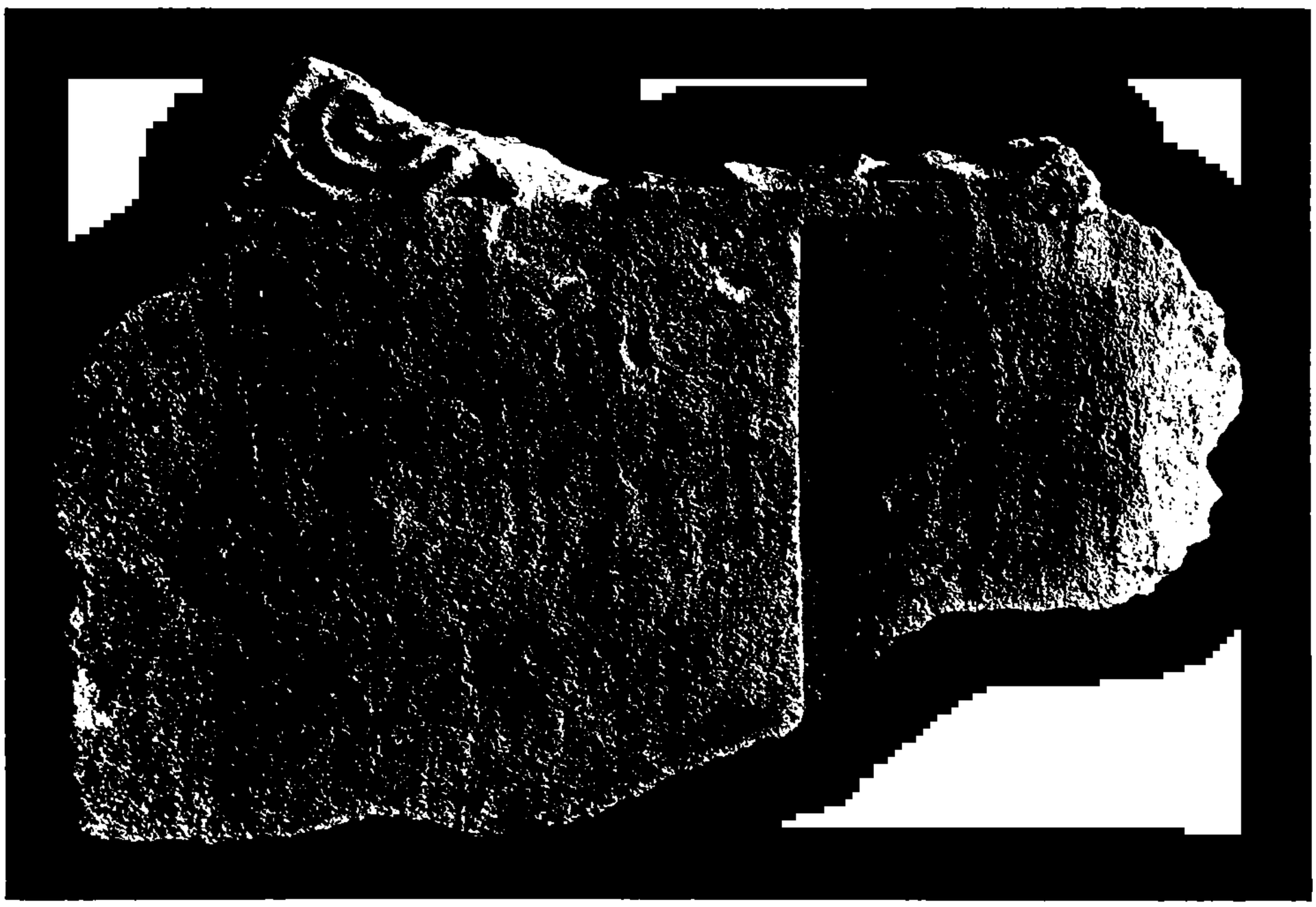


FIG. 191 *b*. FRAGMENT OF SLAB WITH PART OF SPIRAL BORDER AND SECTION OF FLAT COLUMN: KNOSSOS.

§ 98. Anticipations of Later 'Palace Style'—L. M. I *b* Class: Finds of L. M. I Pottery in Egypt.

Antecedents to 'Palace Style' of closing epoch; Survivals of naturalism in L. M. I a; *Mature L. M. I* a *deposits in Palace due to partial catastrophe and structural changes; L. M. I* a *deposit beneath 'East Stairs'; North-East House deposit with 'Pithoid jar'; Origin of L. M. I* b *'Pithoid Amphoras'; L. M. I* a *Deposit by 'S.W. Columnar Chamber'; Decay of naturalism —due to Egyptian influence; Corresponding reaction of Cretan Art on Egypt at beginning of New Empire; L. M. I* a *bronzes brought by Envoys from Keftiu; Imported L. M. I* a *painted Vases found in Egypt; the Anibeh* alabastron; *Minoan Embassies of Thothmes III's time synchronize with L. M. I* b *pottery; Sedment* alabastron, *with sacral 'adder mark'; Saqqâra Tomb-group; 'Maket' pot; 'Marine Style' Vases—'Marseilles Ewer', &c.; 'Amphora' of metallic origin; Valuable chronological basis; L. M. I* b *types largely based on small reliefs of steatite and metal vases—Naturalistic influences thus revived; Marine motives—Repetitions of units in decoration—due to old tradition of Nature-printing; Repetition of Knossian unit, Argonaut under rock canopy; 'Marseilles Ewer' Knossian fabric; Minoan sources of Mainland types; Minoan craftsmen working in Mainland centres; Itinerant potters; Fine Mycenae 'Amphora' with purely Minoan designs; Bead festoons derived from Toilette scenes of Knossian frescoes: Degenerate 'festoon' type of a 'L. M. I* c'; *L. M. I* b *types of religious character; Frequency of 'adder mark'; Double Axe repeated; Later 'bivalve' type of Axe symbol—fresh illustration of 'L. M. I* c'; *Absence of L. M. I* b *stratum inside Palace, due to occupation without a break from L. M. I* a *to close of L. M. II.*

Antecedents to 'Palace Style' of closing epoch.

Perhaps the most characteristic product of the closing Palace Period —L. M. II—with which we are in a special way concerned in the present Volume—is a palatial class of pottery, of a fabric that was almost exclusively associated with the site of Knossos itself. But, in order to understand this 'Palace Style'—so intimately connected with the residence of the last Priest-kings—it is necessary to pass in review the products of the preceding L. M. I stages, particularly of L. M. I *b*, from which it indeed arose by a gradual transition. The grandiose fabrics of the last palatial epoch are largely dependent on this later L. M. I style, which itself, for pure decorative harmony, is unrivalled in the Minoan ceramic series.

Survivals of naturalism in L. M. I *a*.

On the other hand, the earlier Late Minoan phase, L. M. I *a*, embodies many of the naturalistic elements of the Third Middle Minoan, the origins of which have in turn received some fresh illustration in Section 93, above, from the relief style of the Second Middle Minoan stage.

Several of the plant and flower designs on the painted pottery belonging to the opening phase of L. M. I and the transition from M. M. III *b*, stand in a direct relation to some of the natural forms supplied by the remains of the painted stucco panels of the 'House of the Frescoes'—such as the lilies and crocus sprays, and the wild peas that there climb about the rocks. These reflect a somewhat passing artistic fashion in which landscapes were preferred to sea-scapes: in L. M. I *b* on the contrary, the 'marine style' is again predominant.

This earlier stage of the first Late Minoan phase does not itself answer to any marked epoch in the structural history of the Palace. The catastrophic ruin to which the largest and most widespread deposit of pottery was due took place, as has already been demonstrated in the course of this work, towards the close of M. M. III, followed apparently in the West part of the site by a partial hiatus. The next epoch marked by considerable ceramic accumulations represents the lower limit of L. M. I *a* and belongs to a time when most of the elements of pure naturalism visible in its opening phase had been discarded.

Deposits of L. M. I *a* pottery in Palace: probably due to Fresh Seismic Disturbances.

Mature L. M. I *a* deposits in Palace due to partial catastrophe and structural changes.

The secretion of the later L. M. I *a* deposits—themselves much more local in their distribution than those which marked the previous overthrow—was the result of a work of partial renovation and of still more general redecoration for which we have evidence throughout the Domestic Quarter and elsewhere on the Eastern slope at an epoch intermediate between the catastrophic close of the M. M. III Palace and its final ruin at the end of L. M. II. The occasion for this work of renewal seems to have been supplied by an Earthquake shock of somewhat less violence than the other two, though there are strong indications that the remarkable Temple-Tomb of a Priest-king of the New Era, described below,[1] owed the wreckage of its upper columnar Sanctuary to this convulsion.

L. M. I *a* deposit beneath later 'East Stairs'.

The most clearly marked instance of a considerable ceramic hoard deposited at this intermediate epoch—accompanied too by evidence of structural alterations amounting in the adjoining area to a somewhat radical

[1] See Pt. II, § 116.

change of plan—occurred beneath the later 'East Stairs', the former Eastward prolongation of the Lower E.W. Corridor being at the same time blocked. Some account of this late L. M. I *a* deposit—specially remarkable for its numerous 'flower-pot' vases—has been given in the preceding Volume.[1] It covered the whole period of Palace history from the time of the previous catastrophe onwards, including some 'post-seismic' M. M. III elements such as fragments of 'Medallion *pithoi*'. L. M. I *a* pottery was represented in it up to a fairly mature stage, well illustrated by the vases found in the Gypsàdes Well.[2] But as yet there is no sign of types nearly related to the typical L. M. I *b* class. On general grounds the date of this 'East Stairs Deposit' has been above assigned to about 1520 B.C.

'Pithoid jars' and 'Pithoid Amphoras': the Senmut Vessel.

Includes remains of 'Medallion *Pithoi*'.

That the fine 'Medallion *Pithoi*' that characterize the 'Royal Magazines'[3] at Knossos, of which fragments were here found mixed up with the L. M. I *a* pottery, exceptionally survived in use to the last days of the Palace, is shown by some remarkable examples of such, to which attention will be called below,[4] on the floors of Magazines in the West wing of the building. These noble jars—the fabric of which, as far as is known, was confined to Knossos—with their triple rows of handles and the ringed bosses between, presenting rosette ornaments painted white on the purplish-brown ground-wash, exercised an important influence on a smaller class of painted jars and 'amphoras', the history of which concerns both the earlier and the later of the L. M. I phases.

N.E. House deposit with 'pithoid jar'.

From a floor deposit of a Magazine of the 'North-East House', the last elements of which represented the same mature L. M. I *a* stage as that beneath the later Palace staircase above described, there were brought out sufficient remains of a painted jar of pithos-like form to make possible its complete restoration as represented in Fig. 192.[5] Its height is 78 centimetres as compared with nearly a metre and a half in the case of the 'Medallion pithoi', but it has a similar contour and, like them, triple rows of six vertically set handles. The term 'pithoid jar' has been above applied to it.

The circles between the handles, with spirals ending in a central disk, themselves bear a certain analogy to the raised rings and enclosed circular

[1] *P. of M.*, iii, pp. 277–9, and Figs. 186, 187.
[2] *Ibid.*, ii, Pt. II, p. 549, Fig. 349.
[3] See *ibid.*, i, p. 562 seqq., and Fig. 409.
[4] See Pt. II, p. 633 seqq.
[5] Repeated from *P. of M.*, ii, Pt. II, p. 423, Fig. 244. See *loc. cit.*, p. 422 and note 1. The vessel, as restored from fragments presented by the Cretan Government, is in the Ashmolean Museum.

bosses of the 'Medallion *pithoi*', and this comparison is carried a step further by a remarkable vessel borne by a Cretan tribute-bearer in the Tomb of Senmut.

FIG. 192. 'PITHOID JAR', L. M. I *a*: FROM NORTH-EAST HOUSE.

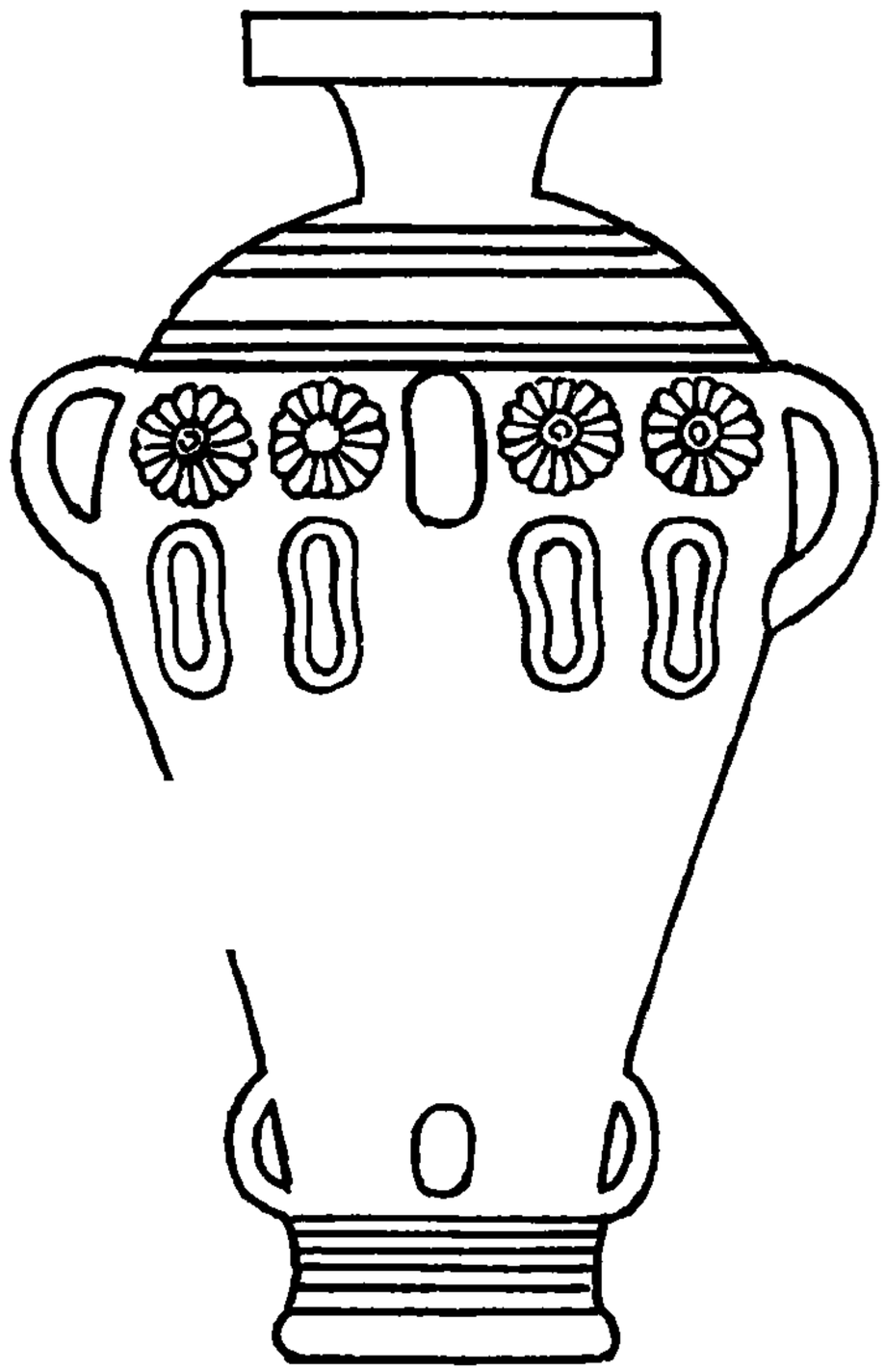


FIG. 193. TRANSLATION INTO BRONZE OF 'PITHOID JAR': TOMB OF SENMUT.

Sam. Fig. II. 2, F. 2.24

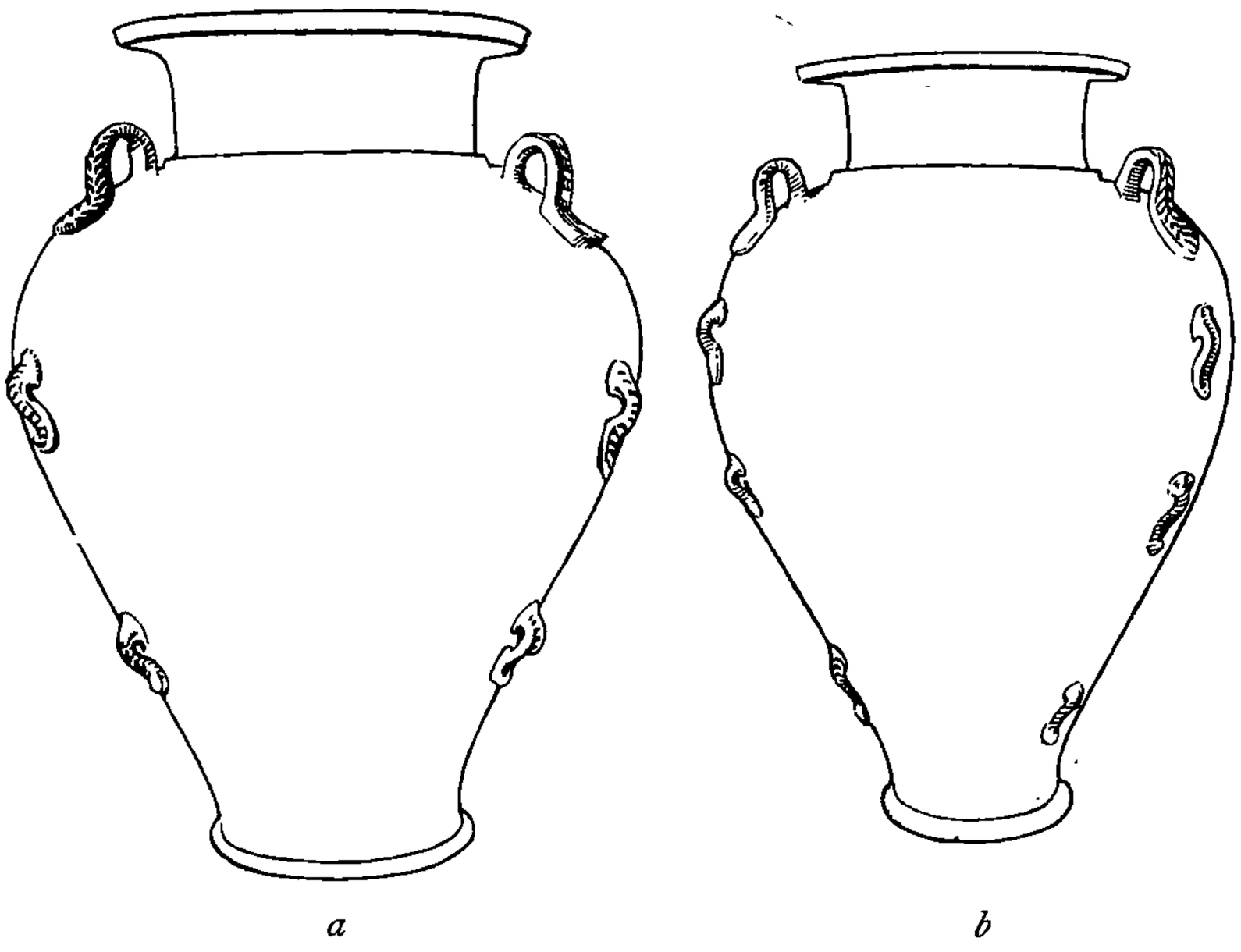
This vessel, reproduced in Fig. 193 [1]—as has been already pointed out in a preceding Section of this work [2]—is, in fact, a translation into bronze of the 'pithoid jar' type with three rows of upright handles (Fig. 192), and here, between those of the upper row, rosette ornaments are introduced, which may be regarded as reminiscent of those of the 'Medallion *pithoi*'. The date of Senmut's Tomb—the earliest of those depicting the tributaries from Keftiu, here approximately given as 1516 B.C.—would fit in well with such a metal translation of a mature L. M. I *a* form.

[1] Repeated from *P. of M.*, ii, Pt. II, p. 426, Fig. 247. Cf., too, p. 737, Fig. 470.

[2] *Ibid.*, p. 422.

But the importance of this type does not end here. This type of jar with its upright loops—in the case of the larger prototype required for the cords used in transporting it—has left its traces on the early

Origin of L. M. I *b* 'Pithoid Amphoras'.



a *b*

FIG. 194. *a*, *b*, 'PITHOID AMPHORAS'.

class of Minoan 'amphoras', characteristic of the succeeding L. M. I *b* phase. The body of these has become more protuberant, but the loop-handles, here hardly necessary even for hand transport, are set in the same way in a series of three or sometimes of four horizontal groups, gradually decreasing in size as they descend, so that the lowest are of quite a 'rudimentary' kind. For distinction's sake these have been termed 'pithoid amphoras'. (See Fig. 194, *a*, *b*.[1])

L. M. I *a* Deposits in Palace.

In the West Quarter of the Palace, attention has already been called to a parallel and certainly contemporary deposit found below the later floor level outside the North Entrance of the South-West Columnar Chamber, which, with its pillar crypt below, seems to have been of a sanctuary character. Another important find of L. M. I *a* pottery, in this case part of a store with complete vessels, occurred beneath the later slabbing of the

L. M. I *a* deposits by S.W. Columnar Chamber. And under later

[1] Repeated from *P. of M.*, ii, Pt. II, p. 425, Fig. 246, *a*, *b*. The specimens here taken are from Kakovatos.

floor of XVIIIth Magazine.

XVIIIth Magazine which had been renewed at this epoch. Remains were here found of some of the best examples of painted vessels illustrating the mature phase of L. M. I *a* that came to light within the Palace area. One

FIG. 195. JUG FROM L. M. I *a* DEPOSIT: XVIIITH MAGAZINE. (HEIGHT, 30 CM.)

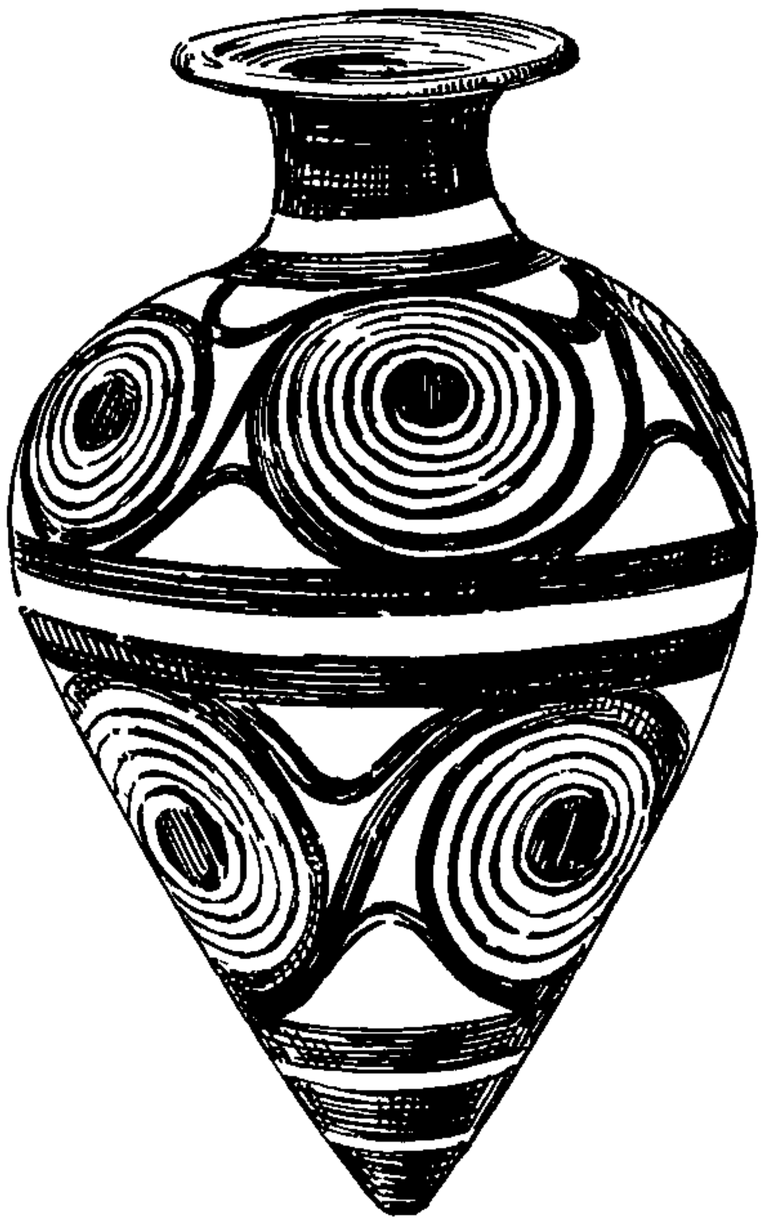


FIG. 196. 'PEG-TOP RHYTON': CORRIDOR OF SWORD TABLETS.

of these is reproduced in Fig. 195.[1] We see on these the characteristic linked circles broadly traced, but with their interior composed of concentric circles, the whole an outgrowth of an earlier motive of pure spirals. These rings in each case enclose a dark central disk decorated with asterisks of white dots and are themselves a reminiscence of earlier 'rosettes'. The white dots are laid on with an imperfectly fixed white pigment characteristic of this ceramic style and visible in other parts of the design in dotted bands, curves, and streaks. In connexion with the above—repeating the same spectacle-like arrangement of the spirals—may be here mentioned a high-spouted ewer brought out from a small parallel deposit in the 'Corridor of the Sword Tablets'.[2] The decoration corresponds with

[1] See above, p. 3.

[2] See *P. of M.*, ii, Pt. I, p. 331. It was found in a layer below the 'Sword tablets': see, too, below, § 115.

that of a 'rhyton' from Shaft Grave II, at Mycenae (Fig. 196), that is intermediate between the earlier 'ostrich-egg' type and the more elongated pear-shaped variety that was usual in the succeeding L. M. I *b* phase,[1] where it is often associated with fine 'marine' designs. 'Rhytons' of similar form and decoration to that of the Shaft Grave were also found at Gournià.[2]

In the deposit of the XVIIIth Magazine there was also found a cup with flowering olive sprays of the heavier class,[3] far removed from the graceful naturalistic designs of those taken directly from frescoes on the walls[4] such as are to be seen in the transitional M. M. III–L. M. I phase.

Increasing Formalism in Art due to Egyptian Reaction.

Decay of naturalism due to Egyptian influence.

The general supersession, in the mature stage of L. M. I *a*, of the earlier naturalistic designs by motives where the decorative element was dominant, was itself, as we shall see, a preliminary sign of a growing spirit of formalism in Art due to the reaction of Egyptian models. On the Palace walls this spirit is everywhere traceable in the new style of fresco designs that makes itself apparent in the considerable restoration of the building that took place at this epoch. The processional figures that wind along the corridors and fill the great reception halls, the constant repetition —however impressive—of the great shields on the galleries of the Grand Staircase, the passion for decorative bands with spiral and rosette motives—all this reflects the new spirit with which we are now confronted, a spirit more in keeping with the Pharaohs than with the old free Cretan tradition, however demonstrative of material splendour and even of military parade.

Corresponding reaction of Cretan Art on Egypt at beginning of New Empire.

Increasing evidence of a new intensive reaction from the Egyptian side is evident from the very beginning of the L. M. I *a* Period onwards. The break in the relations between Crete and the Nile Valley due to the Hyksos Conquests had left its mark in such negative phenomena as the absence of any recorded finds of imported Minoan pottery or other Cretan relics on Egyptian sites for a period of over two centuries after the date of the remarkable finds of polychrome vessels at Lahun, Harageh, and Abydos, belonging to the close of the Nineteenth Century B.C. But, from

[1] Schuchhardt, *Schliemann's Excavations*, p. 213, Fig. 208; Karo, *Schachtgräber*, Pl. CLXX, 221.

[2] *P. of M.*, ii, Pt. I, p. 225, Fig. 129, 10, 12. It also appears at Gournià, where most of the pottery belongs to this mature L. M. I *a* stage.

[3] Cf. *P. of M.*, ii, Pt. II, p. 475, Fig. 282, *b*.

[4] E.g., on the 'Transitional' cup, *ibid.*, Fig. 282, *a*, and on the Pseira jar, *ibid.*, p. 476, Fig. 284.

the beginning of the New Empire—about 1587 B.C.—onwards, the masterpieces of Cretan metallurgic craft, as we see from the inlaid axe-head of King Aahmes, and the dagger of Queen Aah-hotep, were not only making their appearance in the hands of the Egyptian sovereigns themselves, but, together with the 'painting in metal' that they illustrated, were implanting with them a knowledge of Cretan artistic specialities. Amongst these are the rock borders and the 'flying gallop' of animals, and at the same time religious types, such as the Griffin characterized by the eagle's beak and with the sacral 'adder mark' of the Minoan Goddess on his wings. Nor is it long before pottery of the L. M. I *a* class begins to make its appearance as an Egyptain import.

L. M. I *a* Character of Imported Vases in Senmut's Tomb.

L. M. I *a* bronzes brought by envoys from Keftiu.

The vases, many of them of precious metals, depicted in the hands of the Minoan envoys on the walls of Senmut's tomb, that belongs to the close of this Period, show characteristic L. M. I *a* types—some of them of M. M. III tradition. Senmut himself was the great Architect and Director of the Works of the Queen Mother Hatshepsut, her companion greatly beloved, and tutor of her daughter Neferu-ra, and as, according to custom, he would have prepared his last resting-place in his lifetime, the tomb may well date from the flourishing days of the Co-regency. If it was constructed about 1516—towards the close, that is, of L. M. I *a*—it would account for the appearance of a series of metal vessels on the walls like the Vapheio cup types and bull's head 'rhytons', which clearly belong to that Minoan phase, as well as for the representation of the remarkable bronze version of a 'pithoid jar' described above.

Bronze ewers occur of types like those diffused in the other direction from Crete to Mycenae. Indeed, many of the vessels borne by the tribute-bearers, as seen in the tombs of later Egyptian dignitaries down to the latter half of the Fifteenth Century B.C., really perpetuate the earlier types of L. M. I *a* and the great Transitional Age. These representations had in truth become conventional, just as, on the later coins and monuments of the Roman Empire, we find the historic spoils of Gauls or Dacians surviving as generalized barbaric trophies at a time when their forms had become already antiquated in the lands of their origin.

Imported L. M. I *a* painted vases found in Egypt.

The import of painted clay vessels of Minoan make, broken off in the days of the Egyptian Middle Kingdom, is once more illustrated by examples from Early XVIIIth Dynasty deposits in the L. M. I *a* style—though the occurrence of such imported Cretan wares is much less frequent than in the

succeeding epoch, answering to Thothmes III's long reign, when the L. M. I *b* style had come into vogue. Together with fragments of others, one or two ordinary cups are known with spirals and disks surrounded by dots,[1] like those on the vessels from the XVIIIth Magazine. Of more interest is the clay *alabastron* from Gurob, Fig. 197,[2] with three handles and another smaller one added for suspension, which shares with one-handled examples of the same type the 'tennis bat' motive that goes back in Crete to the great days of M. M. II polychromy. A specimen of these latter one-handled vessels was found at Hagia Triada, another as far north as Volo. The example from Gurob was found in Grave 245, dated by scarabs to the early part of the XVIIIth Dynasty.

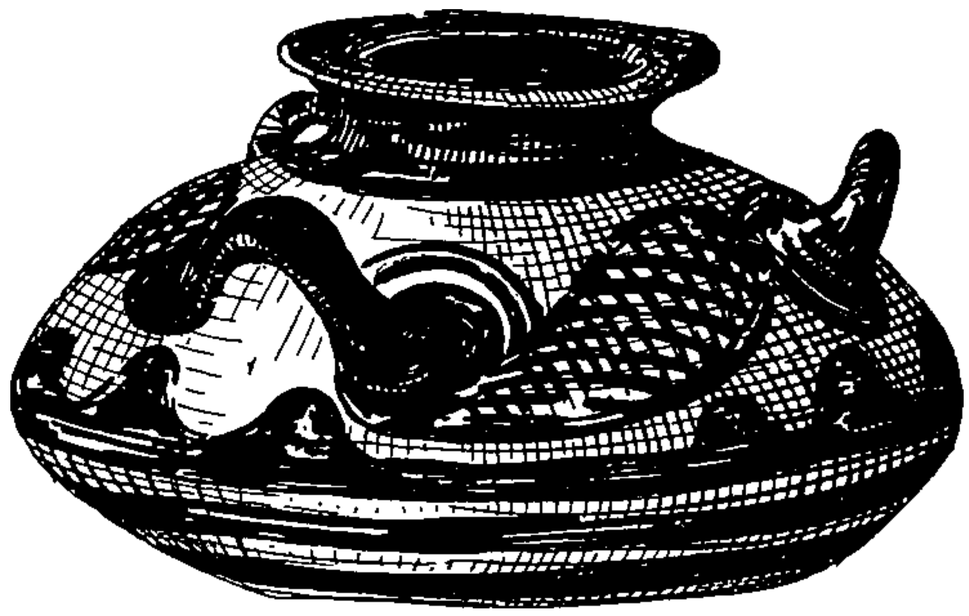


FIG. 197. L. M. I *a* *ALABASTRON* WITH 'TENNIS RACQUET' MOTIVE: GUROB.

Another larger vessel, of the three-handled variety (Fig. 198 *a*, *b*) from an incompleted tomb of an Egyptian cemetery at Anibeh in Nubia,[3] has preserved the tradition of old polychrome motives in a still more unchanged form. It is further removed in shape from the baggy type of Egyptian *alabastron* out of which this whole class arose, and resembles the ordinary L. M. I *b* form of this vessel.[4] On the other hand, its painted decoration at first sight recalls the pure Middle Minoan technique with white patterns on a black ground. The ornament, however, is in reality produced by partially reserving the creamy slip ground of the vase while otherwise covering it with a sepia glaze-medium.[5] The dependence on

The Anibeh *Alabastron.*

[1] *Arch. Anzeiger*, xiv (1899), p. 57, Fig. 1. One cup was from Abusir (Cairo Mus., No. 126, 24). For the 'Pits of the Dogs', cf. J. D. S. Pendlebury, *Aegyptiaca*, p. 112. Another similar was derived from Lord Northampton's excavations near Thebes.

[2] Brunton and Engelbach, *Gurob*, Pl. XIII, 4. The reproduction of this and Fig. 206, from photographs made in the Cairo Museum, is due to the kindness of Mr. J. D. S. Pendlebury.

[3] Woolley, *University of Pennsylvania Journal*, vol. i (1910), pp. 47, 48, and Fig. 31. Fig. 198 *a* and *b* are from photographs kindly supplied me by Mr. Woolley.

[4] The find conditions themselves would bring down the date of this imported vessel impossibly late. The Egyptian remains found in the Anibeh Cemetery indicate, in the excavator's opinion, that the Eighteenth Dynasty was then only a tradition. Its shape may be regarded as fairly advanced and can be paralleled by L. M. I *b* types. All the details of the decoration, however, point as already shown to an intensive survival of M. M. II elements.

[5] The real character of the technique was pointed out by Dr. Mackenzie. Describers of

decorative elements of the last Age of polychromy is itself very striking. The running spiral and series of C's recall similar features on a late M. M. II jar from Knossos,[1] the rosette on the base finds a close parallel in the same quarter[2] and the segmental circle in its centre, the long anterior history of which on Cretan soil has been traced above,[3] serves in the same way to form the centre of a floral design on a fragment of another polychrome M. M. II *b* vase.[4] It is certainly a suggestive fact as indicating derivation from the same area—in spite of the long interval of years—that three distinctive features of the vessel before us should already appear on the Abydos Vase imported into Egypt not later than *c.* 1800 before our era.

The Anibeh *alabastron* stands alone. Otherwise, beyond the vessels mentioned, imported pottery of the earlier L. M. I phase is

b

FIG. 198, *a*, *b*. CLAY *ALABASTRON* FROM EGYPTIAN CEMETERY, ANIBEH, NUBIA.

the vessel have been hitherto misled into calling it 'Kamarestechnik'; so Ernst Reisinger, *Kretische Vasenmalerei* (1909), p. 12; and D. Fimmen, *Die Kretisch-Mykenische Kultur*[2], p. 160 (with Fig. 159: upper view).

[1] *P. of M.*, i, p. 257, Fig. 192, *a*.

[2] *Ibid.*, p. 262, Fig. 194.

[3] See above, pp. 91–93 and Figs. 58–60.

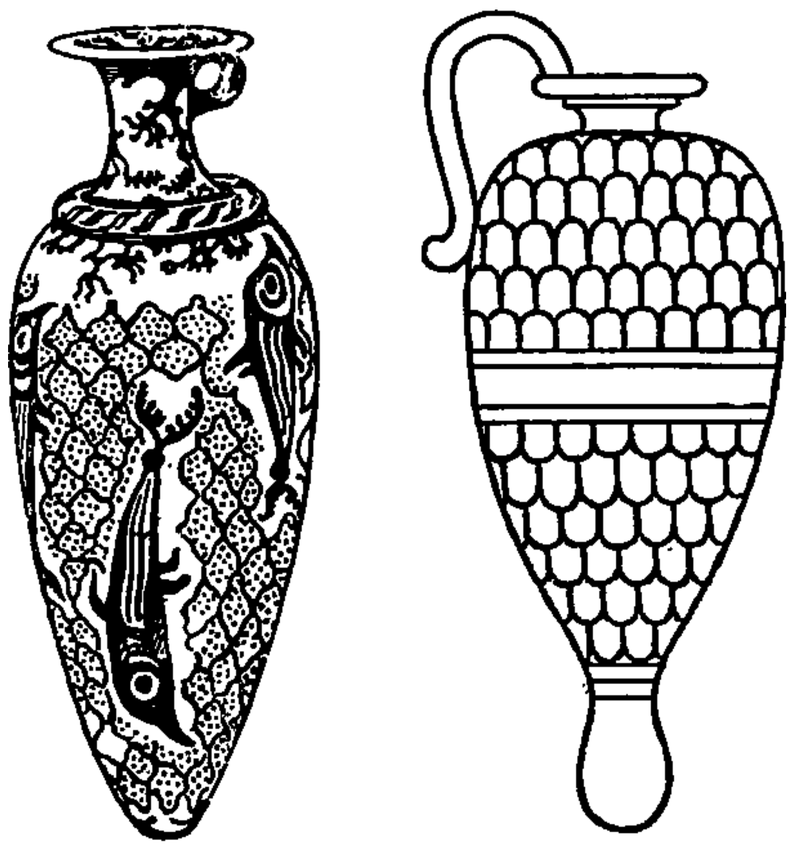
[4] *P. of M.*, i, p. 267, Fig. 198, B.

still to seek in Egypt. During the succeeding period, however, that synchronizes with the actual appearance of Minoan envoys in the tomb paintings of successive Viziers of Hatshepsut and Thothmes III, we are supplied with much fuller data. The period covered by these records of successive Minoan Missions, which roughly correspond with the long reign of Thothmes III, is marked by the occurrence on Egyptian soil of a whole series of painted vases in the L. M. I *b* style.

Synchronism of Tomb Paintings with Keftiu Offerings of Thothmes III Time with L. M. I *b* Phase.

Minoan embassies of Thothmes III reign: synchronize with imports of L. M. I *b* pottery.

Whether or not painted clay vases of Minoan fabric were included among the gifts brought by the envoys of Keftiu remains a moot point. It may, in any case, be said that among the forms of vessel seen in the hands of a tribute-bearer is one that appoximately conforms to the 'pear-shaped' type of 'rhyton' in vogue in L. M. I *b*—itself (Fig. 199, *a*) representing the third generation of descent from the pure 'ostrich-egg' form of the closing M. M. III Period.[1] The handle—in the original Minoan version a mere loop for suspension—is enlarged and a prominent nipple added to the base, but the elongated body sufficiently places the type (Fig. 199, *b*). This 'tertiary' stage occurs on the walls of the Tomb of Rekhmara, who held the office of Vizier of Upper Egypt from Thothmes III's thirty-second year to his death, *c.* 1471–1448 B.C.



a *b*

FIG. 199. *a*, L. M. I *b*, 'RHYTON', PSEIRA; *b*, FROM TOMB OF REKHMARA.

The tomb of his son Men-kheper'ra-senb, who was High Priest of Amon, Architect and 'Chief of the Overseers of Craftsmen', during the later years of Thothmes III, affords sufficient proof that this intimate official intercourse with Egypt continued at least to the middle of the Fifteenth Century B.C. As has been already pointed out, however, the forms of the

[1] See my Comparative Table, *P. of M.*, ii, Pt. I, p. 225, Fig. 129. No. 16 is reproduced in Fig. 199, *b*, above. It seems to represent a metal version with an enlarged handle, rising above the rim and it has a band round the centre of the body covering the junction, it is to be supposed, of two pieces, while the bulbous termination below would have also been a separate piece. The body, however, is clearly of the 'pear-shaped' type.

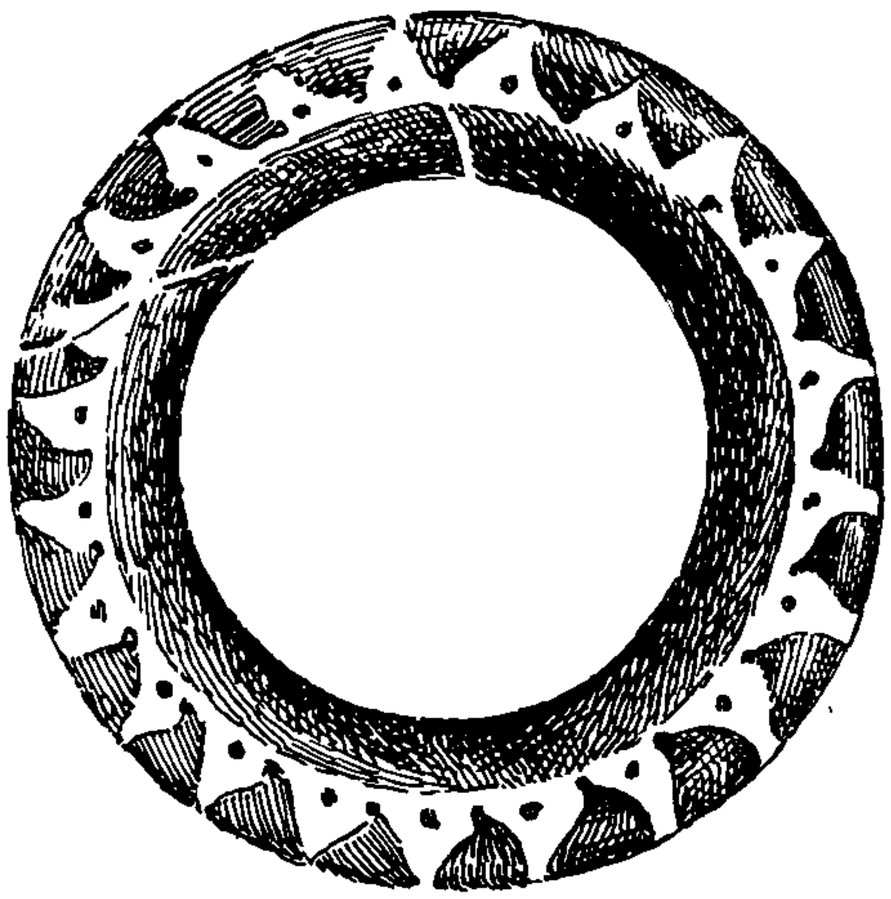


FIG 200 *b*. SACRAL ADDER MARK ON RIM OF SEDMENT *ALABASTRON*.

FIG. 200 *a*. CLAY *ALABASTRON* FROM SEDMENT (HERAKLEOPOLIS), WITH IMITATION OF ALABASTER VEINS.

vessels carried by the men of Keftiu in the later tombs of this series are substantially the same as those of the earlier group that begins with that of Senmut.

The Cretan envoys bearing examples of Minoan metal-work that reached a higher artistic level than anything that Egypt was able to produce, may well be thought to have in practice carried out a commercial propaganda in bringing these fine products before the notice of Pharaoh's high officers. 'Keftiu work'[1] was naturally sought after and as—partly owing to the inferiority of the Egyptian potter's clay—the ceramic fabrics of Crete were also of a superior quality, the evidence of the import of painted vases from that side becomes relatively more abundant. The style of these vessels answers to the finest L. M. I *b* class, and the period to which they belong, corresponding with the dates of the successive Missions to Senmut's successors, covers the whole of the long reign of Thothmes III, and may be roughly set down as the first half of the Fifteenth Century B.C.

[1] *P. of M.*, ii, Pt. II, p. 536 (see Lepsius, *Denkmäler*, xxx *a*, 18, and cf. W. Max Müller, *Asien und Europa*, p. 358).

Unfortunately, though finds of this class have been fairly numerous in Egypt, precise details as to the circumstances of their finding are in most cases either wanting or, from the nature of the case, only conclusive in a general manner. Among the earlier of these is a somewhat high-shaped *alabastron* (Fig. 200 *a*, *b*) with a chevron ornament imitated—as is better shown by some earlier examples of the L. M. I *a* class[1]—from the wavy veins of the material. This specimen was found in Grave 137 of the cemetery of Sedment (Herakleopolis).[2] It will be seen that the vessel is closely related in style—including the lines of dots in the white zigzags—to a vase from a L. M. I house at Mochlos (Fig. 201).[3] An interesting feature in the Sedment example, shown in Fig. 200, *b*, is the sacral 'adder mark' depicted round the upper part of the rim, a feature repeated on other vessels of the L. M. I *b* class and apparently indicative of dedication—as in the case of goblets already described[4]—to ritual uses.

Sedment *alabastron* with sacral 'adder mark'.

FIG. 201. CLAY *ALABASTRON* FROM MOCHLOS WITH CHEVRONS IMITATING ALABASTER VEINS.

Another relatively early find of Minoan vases of L. M. I *b* type in Egypt is the small bowl with lily sprays and the 'alabastron' with the conventionalized palm-tree motive, already described as belonging to a tomb-group at Saqqâra that may be fairly ascribed to the earlier part of Thothmes III's reign.[5] To the lily type here we shall return. The conventionalized palm-trees find their fuller form in the triple group seen in the similar *alabastron* in the Cairo Museum reproduced in

Saqqâra tomb-group.

[1] E. g. *Gournià*, Pl. VII, 15. A good specimen from Knossos is in the Candia Museum. For the alabaster prototype see the example from Isopata, *Preh. Tombs*, p. 149, Fig. 125. 5. 3.

[2] Petrie and Brunton, *Sedment*, ii. It is there illustrated from a drawing of Sir Flinders Petrie. The specimen is now in the Ashmolean Museum, and a fuller illustration of it is given here in Fig. 200. Some other parts of the contents of the Grave were sent to the Museum at Chicago. No account of the Grave is supplied by the text, though we learn that it was 'cleared'. The earliest chronological evidence found in the Eighteenth Dynasty part of the Cemetery relates, however, to Thothmes III (*Sedment*, ii, p. 4).

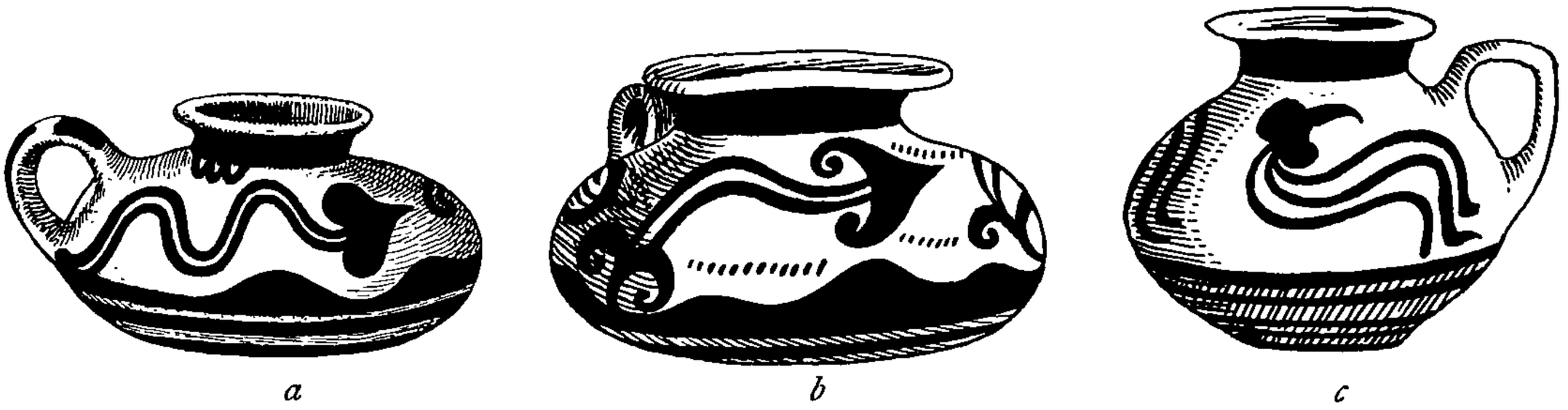
[3] R. B. Seager, *Excavations at Mochlos* (*Am. Journ. of Arch.*, xiii), p. 282, Fig. 5.

[4] See above, p. 184, and Figs. 145 *a* and *b*.

[5] See *P. of M.*, ii, Pt. II, pp. 497, 498, and Fig. 304 f., and cf. *Excavations, Teti Pyramid Cemeteries*, by C. M. Firth and Battiscombe Crumm, Pl. XLII, and pp. 69, 70. The late Dr. R. H. Hall included the Egyptian objects found in this tomb in the earlier Eighteenth Dynasty Class.

Fig. 202.[1] This triple palm group is of great interest as derived from some such fine M. M. II polychrome model as one found in the 'Loom Weight Basement' at Knossos,[2] and the continuous degeneration of which has been

FIG. 202. CLAY *ALABASTRON* WITH TRIPLE PALM GROUP, FOUND IN EGYPT (CAIRO MUSEUM).



a *b* *c*

FIG. 203. 'ONE-HANDLED *ALABASTRON*': *a*, MAKET TOMB, EGYPT (PROBABLY THOTHMES III'S TIME), L. M. I *b*; *b*, VOLO, L. M. I *b*; *c*, VOLO, 'L. M. I *c*'.

traced above to quite late Mainland types.[3] These later offshoots, such as we see them on the 'Ephyraean' cups and goblets, afford another good illustration of what has been called above the 'L. M. I *c*' phase. A stage in this evolution parallel to that seen on the *alabastron* found in Egypt occurs on part of a similar vessel from Zakro,[4] and in a fuller and more ornate form on a 'pear-shaped rhyton' from Pseira, and this traditional design, of which Knossos was the source and Crete the first distributing centre, found a beautiful development at the hands of the Minoan ceramic artists who executed the noble amphoras of Nestor's Pylos.[5]

[1] From a photograph kindly supplied me by Mr. J. D. S. Pendlebury.

[2] *P. of M.*, i, p. 254, Fig. 190.

[3] *P. of M.*, ii, Pt. II, p. 496 (Comparative Table).

[4] *Ibid.*, p. 497, Fig. 303.

[5] See Kurt-Müller, *Alt Pylos* (*Ath. Mitth.* xxxiv, 1909), p. 311 seqq., Pls. XXI, XXII.

A further illustration of a decorative class of great antiquity in Crete, and thence diffused beyond both the Libyan and the Aegean Seas, is supplied by a 'one-handled alabastron' found in the Maket Tomb at

Vase from Maket Tomb, with

FIG. 204. 'AMPHORA' FROM KAKOVATOS, WITH 'SACRAL IVY' MOTIVE.

FIG. 205. CUP FROM VAPHEIO TOMB.

FIG. 206. JUG FROM PALAIKASTRO SHOWING 'OGIVAL CANOPY' MOTIVE.

Kahun [1] in a deposit now attributed to Thothmes III's time. It presents the 'Sacral Ivy' spray with its characteristic double stalk, the origin of

'Sacral Ivy' motive.

[1] *P. of M*, ii, Pt. II, p. 512, Fig. 315, *d*, and p. 488 and note 4; Petrie, *Illahun, Kahun, and Gurob*, Pl. XXVI, 44, and p. 23; cf. too, his remarks, *J. H. S.*, xi (1890), Pl. XIV, 1, and p. 23. Petrie's later attribution to Thothmes III's time (*Trans. R. Soc. Lit.*, xix, p. 16) is accepted by Dr. H. R. Hall (*Aegean Archaeology*, 1915, p. 102).

which, from an earlier Minoan adaptation of the Egyptian papyrus wand, or Waz, with an arched canopy, has already been traced in detail.[1] In Fig. 203[2] it is grouped with a parallel and more or less contemporary specimen from Volo (*b*), together with a later outgrowth of this (*c*), which again is best described as representing the 'L. M. I *c*' style.

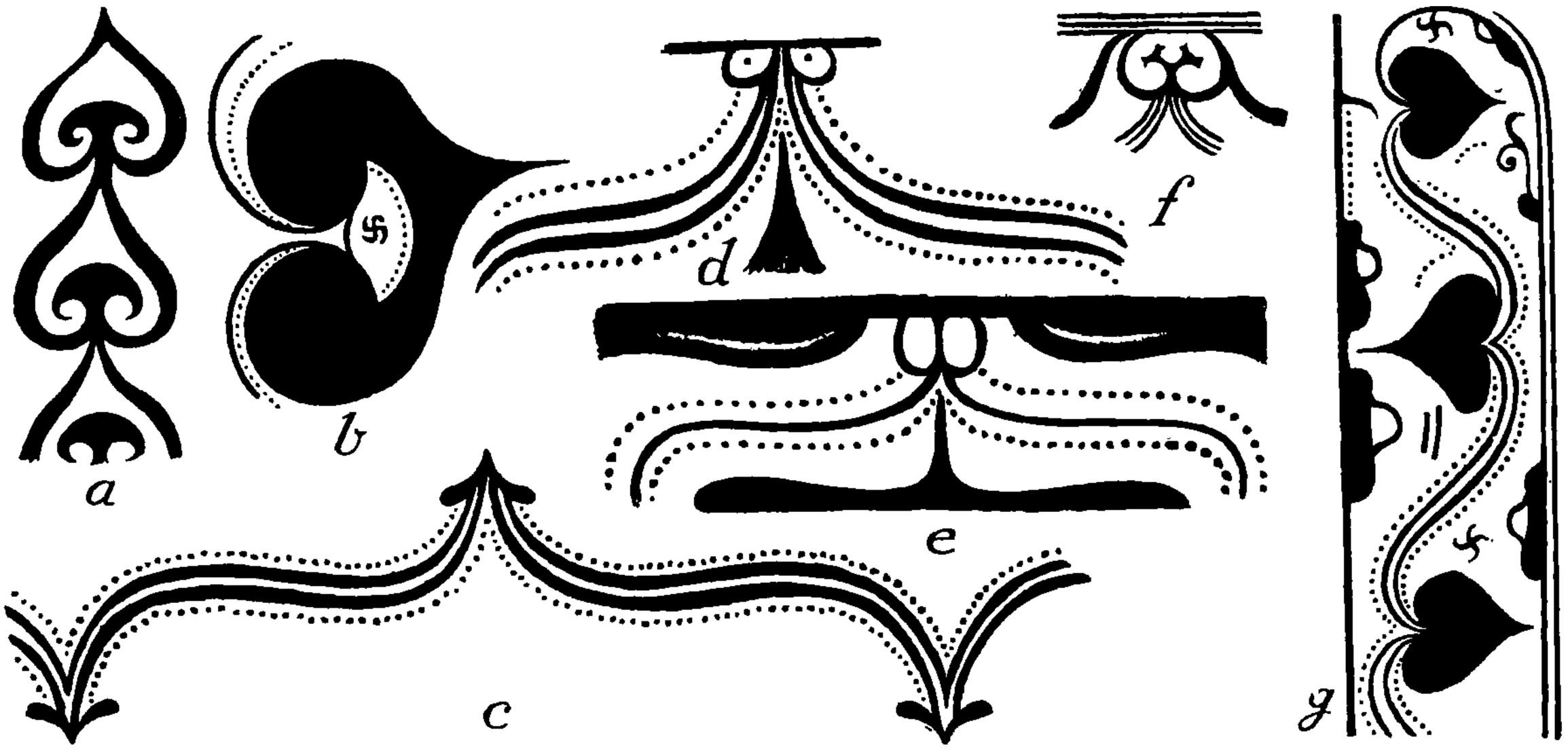


FIG. 207. ORIGIN OF 'OGIVAL CANOPY' MOTIVE (*a*, KNOSSOS; *b*, AEGINA; *c*, *d*, THEBES; *e*, VAPHEIO; *f*, *g*, KAKOVATOS.

Diffusion of this and 'Ogival Canopy' on Mainland and Hittite side.

This 'Sacral Ivy motive' and the 'Ogival Canopy',[3] Figs. 205–207, play a very important part at this epoch, both in Crete and on the Mainland side. The Sacral Ivy decorates some of the finest 'amphoras' from Kakovatos, Fig. 204. More than this, as will be demonstrated below,[4] Minoan potters, working oversea, introduced this motive on the royal Hittite wares.

Marine style vases—the 'Marseilles Ewer'.

Further illustrations of L. M. I *b* types found in Egypt are supplied by a series of vases of the marine class, more particularly described below. The beautiful 'Marseilles Ewer', here reproduced in Fig. 210,[5] the Egyptian provenance of which was certified by Maspero, is—as pointed out below—certainly of Knossian fabric. A similar handle illustrating its metallic origin was found at Lahun (see Fig. 211, *a*, *b*).[6] An *alabastron* and a squat

[1] *P. of M.*, ii, Pt. II, p. 478 seqq.
[2] See *Ibid.*, p. 512, Fig. 315, *d*, *e*, *f*.
[3] *Ibid.*, p. 489 seqq.
[4] See below, Pt. II, pp. 766, 767.
[5] See *Ibid.*, ii, Pt. II, pp. 510 and 512, note 1, and cf. p. 277 below. For Maspero's statement with regard to the provenance of the vase see his *Cat. du Musée Égyptien de Marseille*, No. 1043.
[6] In the Ashmolean Museum at Oxford.

jug with very similar motives were found in Egypt,[1] and it is interesting to note that a large part of a vessel identical in form with the latter, but repre-

FIG. 208. AMPHORA FROM EGYPTIAN THEBES.

FIG. 209. FRAGMENT OF LARGE 'AMPHORA' FROM ACROPOLIS, MYCENAE.

senting a somewhat later phase of the argonauts and marine growths was found in a small rock tomb at Knossos in 1931. (See below, Fig. 314.)

'Amphora' of metallic origin.

Of a different class, and reflecting a metallic original in all its details, is the 'amphora', Fig. 208,[2] from a tomb of the Egyptian Thebes, now in the Ashmolean Museum. That the curvilinear stripes on the zones of this vessel represent curved flutings, like those of a gold goblet already referred

[1] One of these in the Abbott Collection was described by Dr. A. S. Murray in the *Amer. Arch. Journ.*, vi, Pl. XXII, and p. 437 seqq. Dr. Murray remarks of a 'jug' from Erment (Perrot et Chipiez, *L'Art, &c.*, vol. vi, p. 925, Fig. 485, now in the British Museum) that it was clearly painted by the same hand.

[2] See Davis, *Five Theban Tombs*, Pl. XLI: Mentu-her-Khepshep. The Tomb itself is of the XIXth Dynasty, but this was an intrusive object. In the curved bands of the vessel the influence of conventionalized lapidary decoration also is apparent.

to from the Vth Shaft Grave at Mycenae, is further indicated by the intermediate dots, such as on other ceramic specimens imitated from metal-work stand for the rivets by which the plates were joined. From its general style it may be placed somewhat late in the L. M. I *b* series. A remarkable parallel in the shape of a large fragment of similar 'amphora' of greater dimensions was found on the Acropolis at Mycenae in company with other characteristic painted sherds illustrating the L. M. I *b* phase.[1] (Fig. 209). In the Boeotian Thebes this motive recurs in a somewhat secondary shape.[2]

Valuable chronological basis.

The discovery of a series of painted clay vessels of this advanced L. M. I class, which, wherever there is evidence of date, may be taken to belong to the period covered by the long reign of Thothmes III, affords a valuable chronological basis for the early part of the Late Minoan Age. Roughly speaking, it thus covers the first half of the Fifteenth Century B. C. It corresponds, as we have seen, with a period of exceptional intimacy between Crete and the land of the Pharaohs, marked by the records of a series of Missions to the Egyptian Court undertaken by the princes of the 'land of Keftiu'.

Revival of 'Marine' Ceramic Style in L. M. I *b*: Imitation of Small Reliefs.

L. M. I *b* types largely based on small reliefs on steatite and metal vases—Naturalistic influences thus revived.

It is a remarkable fact that—thought hroughout the splendid phase of ceramic design covered by the L. M. I *b* stage the decorative feeling is so freely developed—there was, especially on the marine side, a certain revival of the old naturalistic tradition of the latest Middle Minoan stage. That some of the older fresco designs of this class—such, as for instance, the 'Dolphin Fresco' in the Queen's Megaron—had survived to the last on the Palace walls of Knossos was made probable by the existing remains. On the whole, however, the source of the L. M. I *b* 'marine style' on painted vases seems to have been supplied by a class of soft stone or metal vessels on which small reliefs of rock-work and sea creatures continued to be executed.

Marine motives.

Many of the vase designs belonging to this category are, in fact, themselves only slightly inferior copies on the flat of the masterpieces of a school of small reliefs in soft stone of which an unsurpassed example has come to light in the steatite 'rhyton' with the 'ambushed octopus' found

[1] Furtwängler und Löschcke, *Mykenische Vasen*, Pl. XXV, 188.

[2] Ἀρχ. Ἐφ., 1910, Pl. 10. 4 (Keramopoullos, Μυκηναϊκοὶ τάφοι ἐν Θήβαις).

in the Room of the Throne at Knossos.[1] Evidently copied from a metal original—with more repetition in the design—is the beautiful 'Marseilles ewer', an illustration of which is repeated in this place, Fig. 210.[2] This,

FIG. 210. THE MARSEILLES EWER, KNOSSIAN FABRIC, L. M. I *b*.

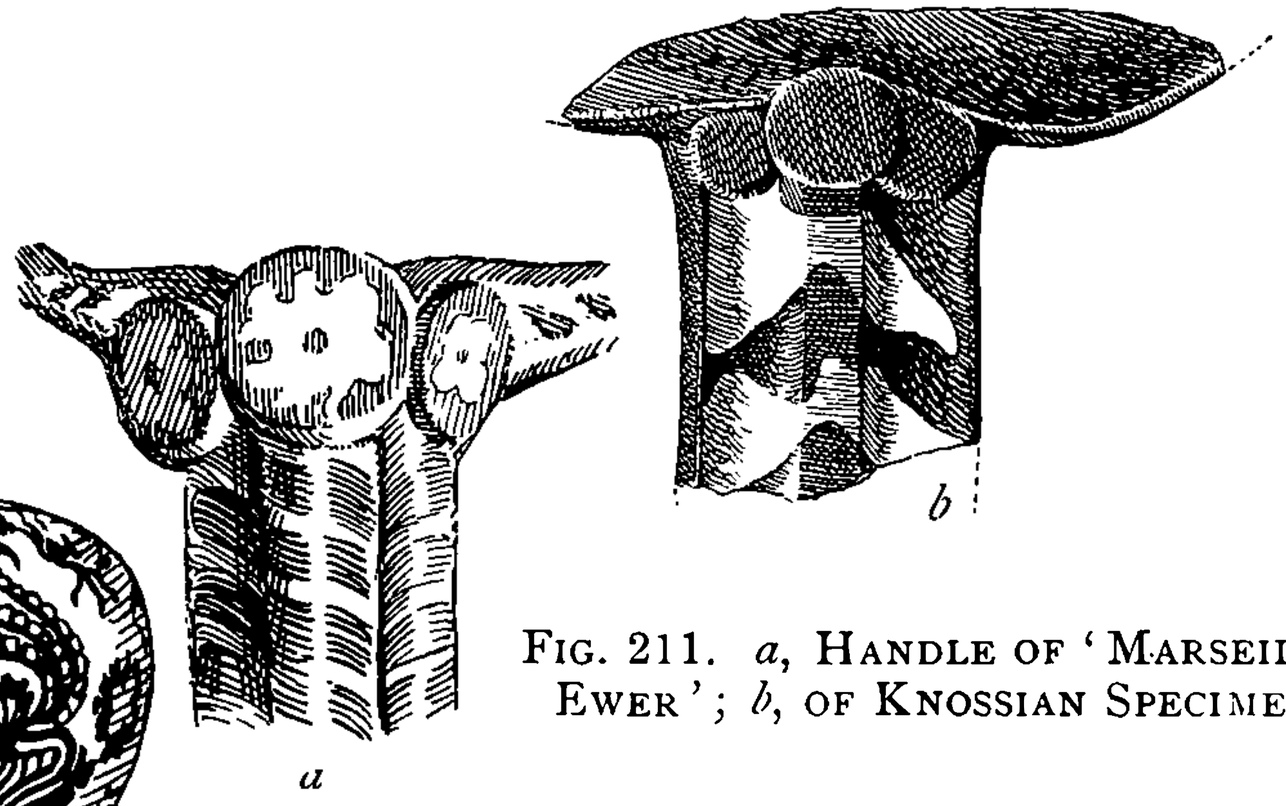


FIG. 211. *a*, HANDLE OF 'MARSEILLES EWER'; *b*, OF KNOSSIAN SPECIMEN.

FIG. 212. ARGONAUT AND ROCK CANOPY: A DECORATIVE UNIT, FROM KNOSSIAN VESSELS.

though it seems to have been found in Egypt, must be regarded as of ascertained Knossian fabric. As already noticed, the handle with its three flat rivet-heads (Fig. 211, *a*) is practically duplicated by the fragmentary specimen of a handle of a similar ewer from Knossos, reproduced in Fig. 211, *b*.

Repetition of units in decoration.

In the case of this vessel (Fig. 210) the field is filled up with what is practically a repetition of the Knossian unit (Fig. 212) consisting of an Argonaut with the conventional triple coil of tentacles and the canopy of rock and spray. The two painted clay *alabastra* found in Egypt—one

[1] *P. of M.*, ii, Pt. II, p. 503, Fig. 307.

[2] Reproduced from *P. of M.*, vol. ii, Pt. II, p. 509, Fig. 312 *a*.

FIG. 213. 'AMPHORA' FROM 'TOMB OF NESTOR', OLD PYLOS (KAKOVATOS), SHOWING REPETITION OF ARGONAUT MOTIVE WITH ROCK CANOPY.

from Erment, already referred to,[1] show a succession of similar Argonauts with their rock-work frames. In connexion with these decorative groups it may be noted that we have here, in fact, a survival of the most ancient

[1] See p. 275 and note 1.

tradition of the 'Marine School' of decoration on the Palace walls—the mechanical multiplication of the many-coloured sponge pattern by dabbing an actual sponge of small dimensions, dipped in orange paint, at intervals on the wet plaster.[1] The coloured, and more or less geometrical decoration of the whole surface thus produced supplies the first known instance of Nature-printing. Of the reproduction of shell forms by Nature-moulding we have, in fact, a still earlier example in the cockle-shell illustrated above, as well as the 'barnacle work of the M. M. I *a* potters.

Due to old tradition of Nature-printing and Nature-moulding. Repetition of Knossian unit—Argonaut under rock canopy.

FIG. 214. SPOUTED BOWL FROM CHAMBER-TOMB, KNOSSOS (SPOUT RESTORED). FOUND IN 1931.

This particular Minoan unit of the Argonaut with its rock canopy leads us, moreover, a step farther in tracing the diffusion of the L. M. I *b* marine ceramic style illustrated by the 'Marseilles Ewer'. Among the splendid 'amphoras' with this class of decoration discovered by the German excavators of the two great tholos tombs at Kakovatos,[2] the 'Old Pylos' of Dr. Dorpfeld, was the specimen reproduced in Fig. 213—of the 'pithoid class' with rows of triple handles characteristic of this epoch. This stately vessel, it may be added, has the further interest of having been found in the *dromos* of Grave A, from the grave-pit of which, at a somewhat earlier date, a neighbouring peasant had extracted the gold signet-ring called from its place of finding, the 'Ring of Nestor',[3] affording a unique revelation of the Minoan ideas regarding resurgence after death, and the Underworld with its Seat of Judgement. On this 'amphora' we see, in a somewhat more flowing style, an almost exact reproduction of the marine elements of the designs on the 'Marseilles ewer', each single detail of

'Marseilles Ewer': Knossian fabric.

[1] *P. of M.*, iii, pp. 361 seqq. and Figs. 238-9.

[2] Kurt Müller, *Alt-Pylos*, *Ath. Mitth.*, xxxiv, 1909, pp 269-328, Plates XII-XXIV.

[3] See A. E., *The Ring of Nestor*, &c. (Macmillans, 1925), p. 43 seqq., and Plates IV, 2 and V, and *P. of M.*, iii. p. 145 seqq.

FIG. 215. AMPHORA SHOWING OCTOPUS AND MARINE GROWTHS ON ROCKS, FROM S.W. CORNER OF PALACE, KNOSSOS.

which may be traced to models—of which Fig. 212 is a specimen—belonging to what can only be called the 'Marine School' of Knossos. Closely related to the design on this Knossian fragment may be noted the trefoil development of the rock and seaweed band which (together with a quatrefoil scheme which accompanies it on the 'Marseilles Ewer'), has left many surviving traces in the later decorative patterns of the Palace Style.[1] This in fact became the 'Three C's' motive—at times reduced to 'Two C's'—described below.[2]

[1] See below, p. 314 and Fig. 250.

[2] Pp. 314, 315 and see Table, Fig. 250.

A similar marine grouping, including Argonauts, rocks with sea-tang and the trifoliate motive—here with sea-grass attached—in a somewhat advanced style is seen on the spouted bowl (Fig. 214) recently discovered in a small sepulchral rock-chamber near the 'Temple-Tomb' at Knossos. Its whole design may be described as of a more 'cursive' character and the objects shown are less closely set together.

The 'amphora' (Fig. 215) is a rare example of a large vessel of this class in the good 'marine' style from the Palace site at Knossos. It was found outside the South-West angle of the building, where much 'Palace Style' (L. M. II) pottery also came to light. This vase clearly cannot be separated from the preceding L. M. I *b* class, though it fits on to the later palatial series in the prominence given to the octopus. The attachment of the arms is certainly clumsy, but they still intertwine according to the tradition of the earlier naturalistic school, of which the 'ambushed octopus' is the masterpiece. In the L. M. II Period and onwards the arms are all separately rendered.[1] Here, as in the case of the transitional example Fig. 216, the 'amphora' has only one tier of handles, a falling away from three-tiered 'pithoid amphora' type. In the succeeding L. M. II stage this limitation is universal.

Mainland L. M. I *b* Types of Cretan Derivation.

Minoan sources of Mainland types.

The appearance in the great sepulchral vault of Nestor's Pylos of the masterpiece of the L. M. I *b* marine decoration, Fig. 213, every detail of which reflects the contemporary Knossian school of vase-painting, and which itself represents the 'pithoid' type of Cretan evolution, is only one of a series of parallel phenomena—some of them already noted—illustrating the absolute dependence at this epoch of Mainland ceramic forms on those of Minoan Crete. Amongst the whole magnificent group of painted 'amphoras' from the Kakovatos tombs, there is not one design the details of which cannot be paralleled from a Minoan source. Alternately we see the conventionalized group of three palm-trees of M. M. II heritage and its derivatives[2] and of the 'Sacral Ivy'[3] which reflects the still earlier borrowing of the papyrus wand motive from Middle Empire Egypt. We see this 'ivy' motive, moreover, both in its sacral and its purely vegetable form and, again, as spun out into a remarkable ornamental creation of this epoch to which attention has been already called—the 'Ogival Canopy'.[4] In other cases, again, we find the sacred *waz* symbol combined with the lily flower, as

[1] For the octopods on 'Palace Style' Vases see below, p. 305 seqq.

[2] See *P. of M.*, ii, Pt. II, p. 493 seqq., and p. 496, Fig. 301.

[3] *Ibid.*, p. 478 seqq.

[4] *Ibid.*, p. 489 seqq. and p. 492, Fig. 297.

FIG. 216. L. M. I *b*–L. M.II *a* 'AMPHORA', FROM MYCENAE, OF PRESUMED KNOSSIAN FABRIC, WITH FOLIATE AND *WAZ*-LILY MOTIVES. (HT. 1–2 M.)

on the crown of the 'Priest-king' relief[1] and the characteristic bead necklace motive with its crocus-like pendants—a detail which, as we shall see, was excerpted from the 'toilette' scenes of the M. M. III painted friezes.[2]

[1] *P. of M.*, ii, Pt. II, p. 776, Fig. 504 B.

[2] See below, p. 285 and Fig. 219.

Throughout the regions of Mainland Greece, so thoroughly dominated by Minoan culture at this epoch, the decorative motives on the vases rehearse the repertory of the similar designs as seen on the Cretan side, where we are able to pursue the full story of their origins. As depicted at the time of their first appearance in the overseas area, they exhibit unchanged, in their fully developed shape, the ceramic fashions already in

Minoan craftsmen working in Mainland centres.

FIG. 217. L. M. I *b* EWER FROM PALAIKASTRO WITH FOLIATE AND *WAZ*-LILY MOTIVES.

FIG. 218. FRAGMENT OF L. M. I *b* VASE FROM KNOSSOS.

vogue in their insular home about the beginning of the Fifteenth Century B.C. This does not represent any kind of 'Mycenaean' or 'Helladic' growth, but—whether at Mycenae itself, at Old Pylos, in the Vapheio Tomb of Amyklae, or at the Boeotian Thebes on the other side of the Gulf,—must be taken to imply a wholesale implantation of such types at the hands of Minoan potters, in the wake of a very real wave of Conquest.

These vases are executed in the same style though often in local clay, and it is reasonable to infer that at this time Cretan potters, trained in the insular schools of their craft, had followed on the heels of the military bands and were practising their art in the new Mainland centres of Minoan dominon.

Itinerent potters.

Actual importation of the Cretan potters' work doubtless played a part, but, considering the size and texture of many of these fine vessels and the imperfect facilities of carriage then existing, both on land and sea, there remains a great probability that the larger and proportionately more

breakable vessels would have been made at or near the spots where they were found. It has already been noted, indeed, with regard to smaller vessels, that a widely distributed class of thin-walled M. M. II bowls with repoussé reliefs from cockle-shell moulds, were probably the work of itinerant potters who had brought their moulds with them from the centre of the fabric.

On the other hand, the occurrence of Minoan pots of small or medium size on Egyptian sites, where good potter's clay was not at hand, may be regarded as sufficient evidence of transportation from overseas. The larger vessels, such as Late Minoan jars and 'amphoras', are not found there.

Fine Mycenae 'amphora' with purely Minoan designs.

A striking example of the detailed reproduction of decorative features that are the characteristic product of a Cretan school is afforded by what is perhaps the most splendid of all painted vases found on the site of Mycenae (Fig. 216).[1] The lily frieze on this and the foliate scrolls—here linked with an antecedent stage of the *Waz*-lily type—seen above and below, present the closest points of resemblance with the designs on the ewer from Palaikastro, Fig. 217.[2] A certain 'contamination' with the 'marine' style is evidenced in both cases by the conventional rocks above and below with scraps of sea-tang adhering, and by the ornamentalized 'brittle-stars' with their curving rays inserted in the field. A very similar foliate scroll with both the conventionalized rock-work above and the brittle-stars, and terminating itself in a coil composed of rock and sea-weed, appears on a fragment of a vase from Knossos (Fig. 218). All three vases are thus marked as part of a collective group. It is also further noteworthy that the Palaikastro vase, which is of metallic derivation, answers in type to the 'Marseilles ewer', the Knossian origin of which has already been suggested. This 'amphora' must be with great probability regarded as of Knossian fabric and was found with Fig. 262 (p. 321 below) in the incipient 'Palace style'.

Origin of Bead Festoons and Crocus Pendants on L. M. I *b* Vases from the 'Toilette' Frescoes of the M. M. III Palace at Knossos.

Bead festoons derived from toilette

In connexion with the survival of older decorative elements on the walls may be noticed the echo among the varied designs of the L. M. I *b* ceramic group of what is clearly, as pointed out in Vol. II,[3] an adaptation

[1] From *J. H. S.*, xxiv, Pl. XIII, as restored by Mr. Halfvor Bagge under (Sir) John Marshall's direction. It was found in a chamber tomb at Mycenae (see below, § 116), and was published (*op. cit.*, pp. 322, 323) by Professor R. C. Bosanquet.

[2] Unpublished objects from *Palaikastro Excavations*, 1923, p. 46, Fig. 35. It was there, according to the earlier system of classification, ascribed to L. M. II.

[3] *P. of M.*, ii, Pt. II, p. 427.

of a detail of the 'toilette scenes' that seem to have been a prominent feature in the fresco designs belonging to the middle period of the older Palace. These are illustrated by remains from the older 'East Hall' as well as

scenes of Knossian frescoes.

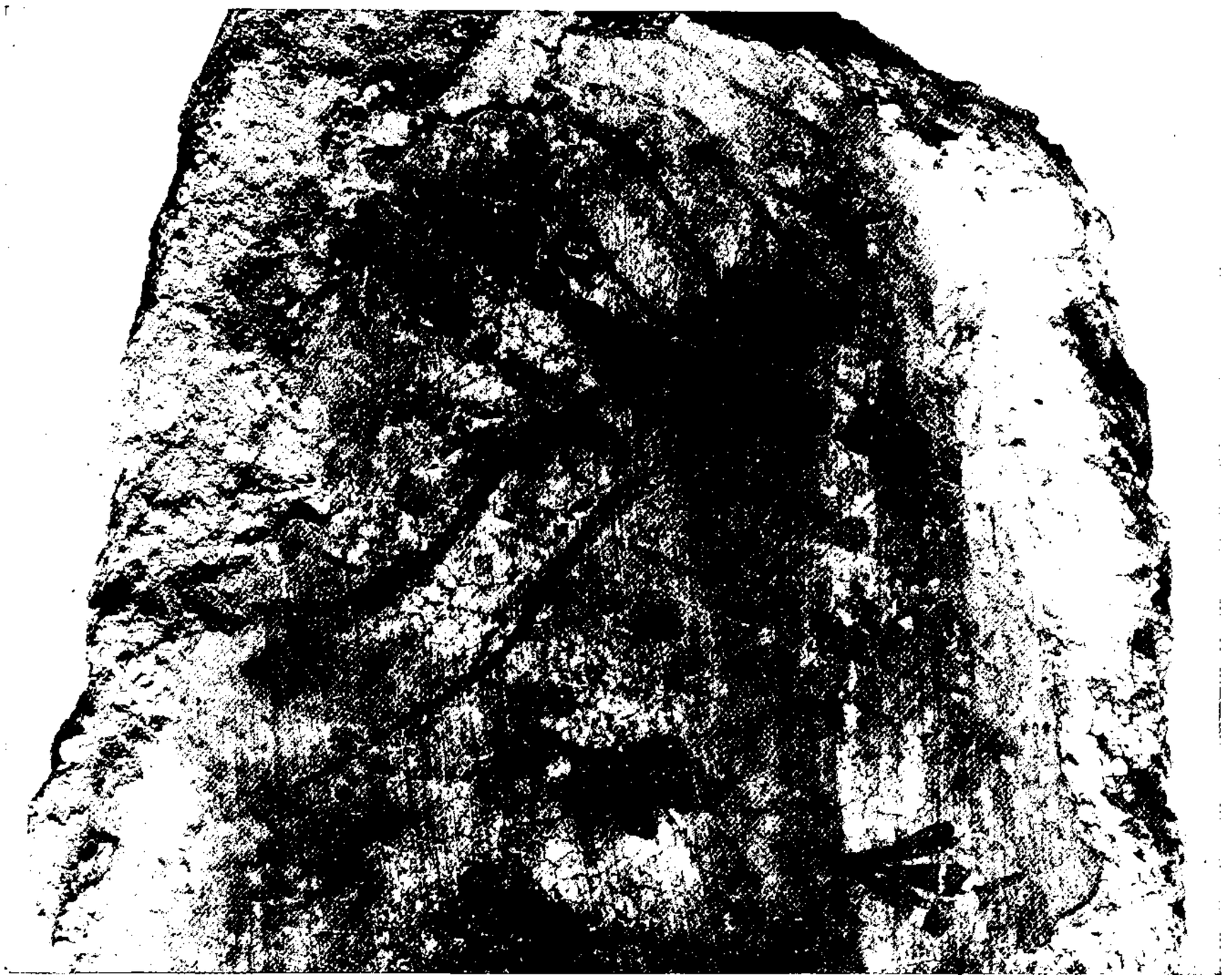


FIG. 219. FRAGMENT OF 'LADIES IN BLUE' FRESCO; FEMALE HAND FINGERING BEADED NECKLACE; CROCUS CHAIN BELOW.

by those from the earlier passage-way that existed below the 'Corridor of the Procession', and the fine relief fragment known as the 'Jewel Fresco' belongs to the same class. Necklaces of round beads are a recurring feature on these designs and, together with these, others in the form of chains of crocuses or saffron flowers, fitting into one another like children's 'daisy chains'. A beautiful fragment of one of these fresco scenes—'the Ladies in Blue'—with bead and crocus necklaces, is here reproduced in Fig. 219.[1]

The L. M. I *b* vase painters while repeating the beads as festoons, also introduced into various vase designs of this epoch—especially those of the 'Ogival Canopy' group[2]—seem to have taken their versions of the crocus flowers from some parallel design, in which, like the lilies of the Priest-king's chain of honour, they had served as pendants.

[1] Repeated from *P. of M.*, i, p. 546, Fig. 398. Unfortunately this exquisite fragment was much damaged by the earthquake of 1926.

[2] See *P. of M.*, ii, Pt. II, p. 492.

The motive itself is clearly a decorative by-product of the Great Palace, but, while well represented in a fragmentary form on the site of Knossos itself, receives its fullest illustration from an 'amphora' found in the neighbouring Minoan settlement of Tylissos. Its surface was a good deal perished, but a complete restoration of the design is given in Fig. 220. It is again a noteworthy fact that remains of another example of this peculiarly Knossian vase type, that carries with it a reminiscence of a whole cycle of designs that once decorated the Palace walls, was found in Tholos A at Nestor's Pylos.[1]

FIG. 220. L. M. I*b* *AMPHORA* FROM TYLISSOS WITH BEADED FESTOONS AND PENDANT CROCUS FLOWERS COMBINED WITH ZONES OF MARINE MOTIVES.

This 'amphora' (Fig. 220), with its three tiers of handles, dwindling in size as they descend, is a typical example of the 'pithoid' form described above, the ancestral stage of which is to be found in the 'Medallion *pithoi*' of the 'Royal Magazines' at Knossos. We see here a beautiful combination, in alternating zones, of the pendant flowers and the beaded festoons from which they hang, with a succession of trefoil groups formed of rock-work and sea-tang—the units on the characteristic

[1] Kurt Müller, *Ath. Mitth.* xxxiv (1909), Pl. XXIV, 6 (a specimen fragment), and p. 306.

marine vase decoration such as we see it interspersed with Argonauts on the 'Marseilles' ewer and the 'amphora' of the same 'pithoid' type (Fig. 213) from Nestor's Pylos. Both the vases themselves and the decorative motives that they present belong to the Knossian cycle, and in their origins are indissolubly connected with the past history of the Great Palace.

This alternation of beaded festoons and pendant crocus flowers with marine motives has received fresh illustration from the site of Knossos in the fragmentary remains of two vases shown in Figs. 221 and 222. In the first case[1] conventional rocks

FIG. 221. PENDANT CROCUS AND CONVENTIONAL ROCK MOTIVE, KNOSSOS, L. M. I *b*.

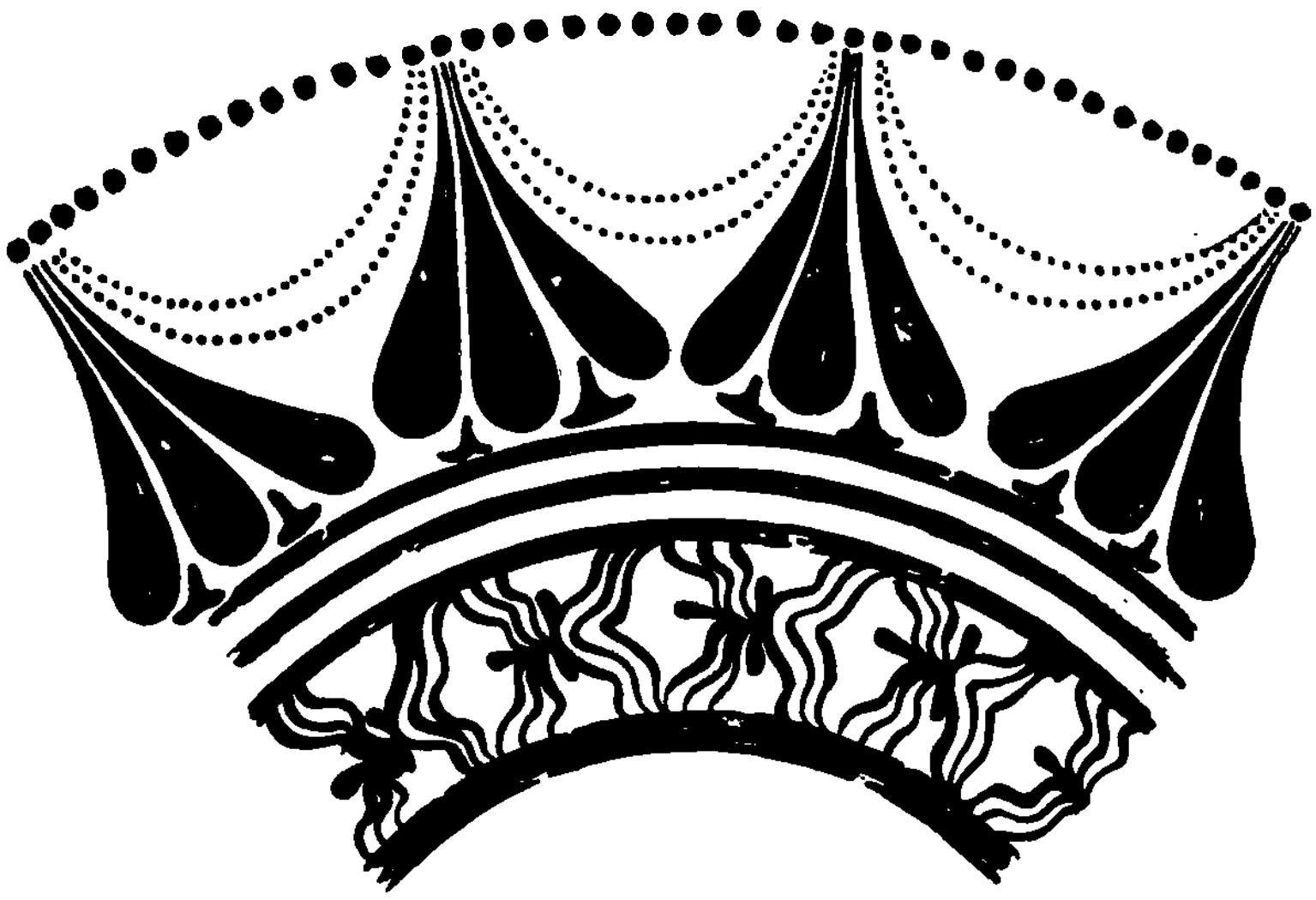


FIG. 222. PENDANT CROCUS AND MARINE MOTIVE, KNOSSOS, L. M. I *b*.

are introduced between the pendants. In Fig. 222,[2] here developed, the

[1] On what seems to be part of a 'pithoid amphora', from a wall of the South-West House explored in 1931. The diameter of the fragment is 14·2 cm.

[2] The lower part of a jug with a base 6·2 cm. in diameter. From North of the High Priest's House (T. P. 3, 1931). For a similar marine creature in profile, see *P. of M.*, ii, Pt. II. p. 506, Fig. 310 *b*.

floral zone is succeeded by one in which we see repetitions of a sea creature that has the appearance of some small 'stalk-eyed' crustacean. At Thebes these pendants are associated with the 'Sacral Ivy'.[1]

FIG. 223. 'AMPHORA', ILLUSTRATING DEGENERATE MOTIVE OF BEADED FESTOONS AND PENDANTS IN THE 'L. M. I *c*' STYLE, FROM IALYSOS.

These bead-festoons and pendant flowers—in their ultimate source derived from actual jewellery and taken over in their conventionalized form from a particular class of palatial frescoes—have a special interest in their relation to a degenerate type of the same ornament that appears on somewhat later ceramic fabrics. At Knossos itself and in the area more immediately dominated by its rulers the exquisite L. M. I *b* designs were, as we shall see, superseded by a new and grandiose fashion in vase decoration characteristic of the latest Age of the Palace (L. M. II), and to which the term 'Palace Style' *par excellence* is here applied. On the break up of what may be reasonably regarded as a unitary 'Minoan Empire' on the Mainland side, both in that area and to a certain extent in the outlying parts of the Island itself, the currency of the artistic models supplied by the old Cretan centre was naturally much restricted by this palatial outgrowth.

There was no other civilizing influence to supply the place of Knossos, and, as a consequence, the ceramic fashions continued to survive on the

[1] Ἀρχ. Δελτ., iii, p. 201, Fig. 145. The 'Sacral Ivy' is of an advanced decorative type.

old lines but in a gradual course of decline. To these fabrics the name of L. M. I *c* may be not inaptly applied. More will be said on this below.[1]

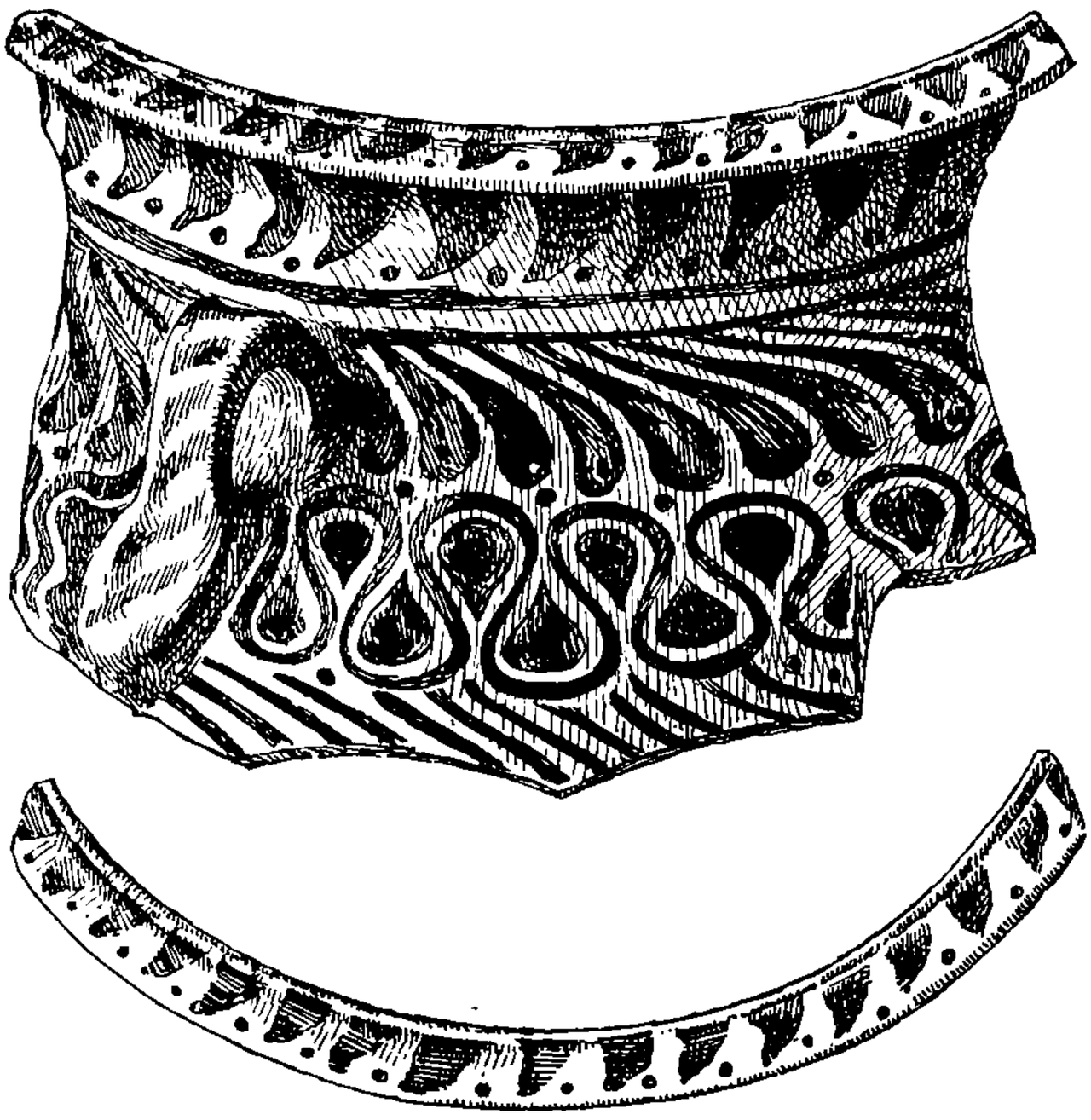


FIG. 224. PART OF A JUG FROM KNOSSOS WITH SACRAL 'ADDER-MARK' ROUND NECK AND RIM: L. M. I *b*.

Of this 'Colonial' survival of the older ceramic tradition, of which Mycenae itself and the Boeotian Thebes supply good illustrations, many new examples have been due to the brilliant results achieved by Professor Maiuri's further excavations of the cemeteries of Ialysos in Rhodes.[2] Amongst these the 'amphora', Fig. 223,[3] —showing in a formalized and thoroughly degenerate style the floral pendants of the beautiful L. M. I *b* group above described—may be taken as a good example of these decadent 'L. M. I *c*' fabrics.

The 'Adder Mark' and Double Axe on L. M. I *b* Vases.

L. M. I *b* types of religious character.

Apart from these vase types of a more purely decorative and artistic nature must be noted a class of L. M. I *b* vessels exhibiting Minoan religious symbols and in some cases, doubtless, of ritual usage.

The two goblets, one from Knossos and one from Phaestos, with the 'adder mark' of the Goddess round them and handles ending the snakes' heads, have already supplied good examples of this sacral class, the latter vessel presenting a further indication of a religious nature in a symbolic combination of the Double Axe and 'Sacral Knot'. The appearance of what may be called the 'consecrating' mark of the Goddess and the emblem of her guardianship round the rim or neck—standing as the equivalent of the complete serpent—is a frequent feature in this class of ware. A

Frequency of 'Adder mark'.

[1] See p. 292 seqq.

[2] Maiuri, *Jalisos, Scavi della Missione Italiana a Rodi, Parti I. II.* (*Annuario* 1926).

[3] *Op. cit.*, p. 104, Fig. 109.

fragment of a jug from Knossos is given in Fig. 224 with the 'adder mark' in its complete shape both below and above the rim. The miniature

FIG. 225. MINIATURE HOLE-SPOUTED VASE; TEMPLE TOMB, KNOSSOS. ($\frac{1}{1}$)

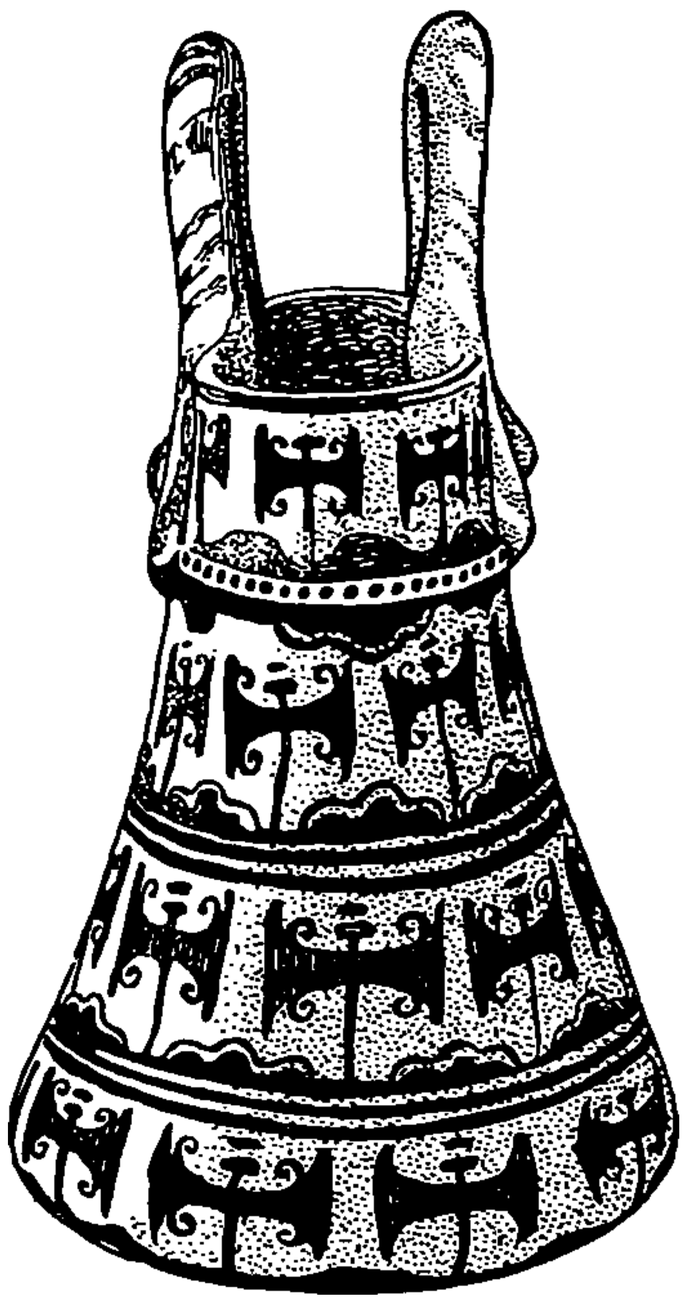


FIG. 226. BASKET-LIKE VASE FROM PSEIRA SHOWING DOUBLE-AXE MOTIVE REPEATED: L. M. I *b*.

'hole-spouted' vase, Fig. 225, found in the Temple Tomb, shows the motive, without the dots, below the rim, accompanied by plants combining the '*waz*' lilies with stellate flowers. This sacral feature was taken over on to the great 'amphoras' and other painted vessels of the succeeding 'Palace Style'.

As has been already noticed, the Minoan 8-shaped shield, which also appears on vases of this class, has also a strong religious signification.[1] Fragments of L. M. I *b alabastra* presenting this symbolic motive occurred on such widely distant sites as Phylakopi in Melos and Gizer in Palestine,[2] the first certainly, and the second probably, of Cretan exportation.

Double Axe repeated.

The frequent repetition of the Double Axe is also a characteristic of this epoch, and is well illustrated by the basket-shaped vessel found by Seager in a house at Pseira, Fig. 226, where bands of much conventionalized rock-work appear above and below. Fragmentary evidence from Knossos and elsewhere shows that the sacred weapon was repeated in the same way round pedestalled goblets, as was already the case in L. M. I *a*.[3]

[1] *P. of M.* iii, p. 314 seqq.

[2] See *ibid.*, p. 312, Figs. 200, 201.

[3] A fragment of a goblet with this symbol repeated on the rim occurred in the 'Room

In the 'L. M. I *c*' style, its 'wings', as we shall see, were modified, so that it resembled a bivalve shell. (See Appendix to Section, p. 292.)

As shown below, this form is a special product of the Mainland side, where the L. M. I *b* tradition survived in this degenerate shape.

Rarity of L. M. I *b* Sherds in Floor Deposits of Palace: explained.

No L. M. I *b* stratum inside Palace.

Although fine ceramic remains of the L. M. I *b* class were found in a continuous votive deposit at the South-West Palace angle, as well as in neighbouring houses,[1] they were of rare occurrence within the building. Nor is the reason for this far to seek. According to the regular law, vases—with the exception of larger jars—for these often survive structural changes—and other smaller relics found on floor-levels, date from the last stage of their habitation. Intermediate remains are cleared away and must be looked for in rubbish heaps outside the building.

Due to occupation without a break from L. M. I *a* to close of L. M. II.

But, as has already been shown, the last serious structural change in the Palace fully carried out was due to a work of restoration undertaken about the close of the mature phase of L. M. I *a* which resulted in the covering over of deposits like those under the later 'East Stairs' or that under the later floor of the XVIIIth Magazine. The work of redecoration that marked the latest Palace epoch answering to the L. M. II style—except for the Throne Room area where the earlier evidence was wiped out—was only beginning when the final ruin came. Otherwise the mature L. M. I *a* elements survived.

Throughout the greater part of the building the last floor deposits only exhibit the objects in use at the moment of the final overthrow, including ceramic remains that illustrate the latest Palace style and clay tablets of the most advanced linear class. There is practically nothing to represent any intermediate stage between L. M. I *a* and the fully developed L. M. II.

It will also be shown that L. M. I *b* was itself here of shorter duration.[2]

of the Vases' of the 'House of the Frescoes' where a fine jug was found with the same motive (*P. of M.*, ii, Pt. II, pp. 436, 437, Fig. 253, E, and 254).

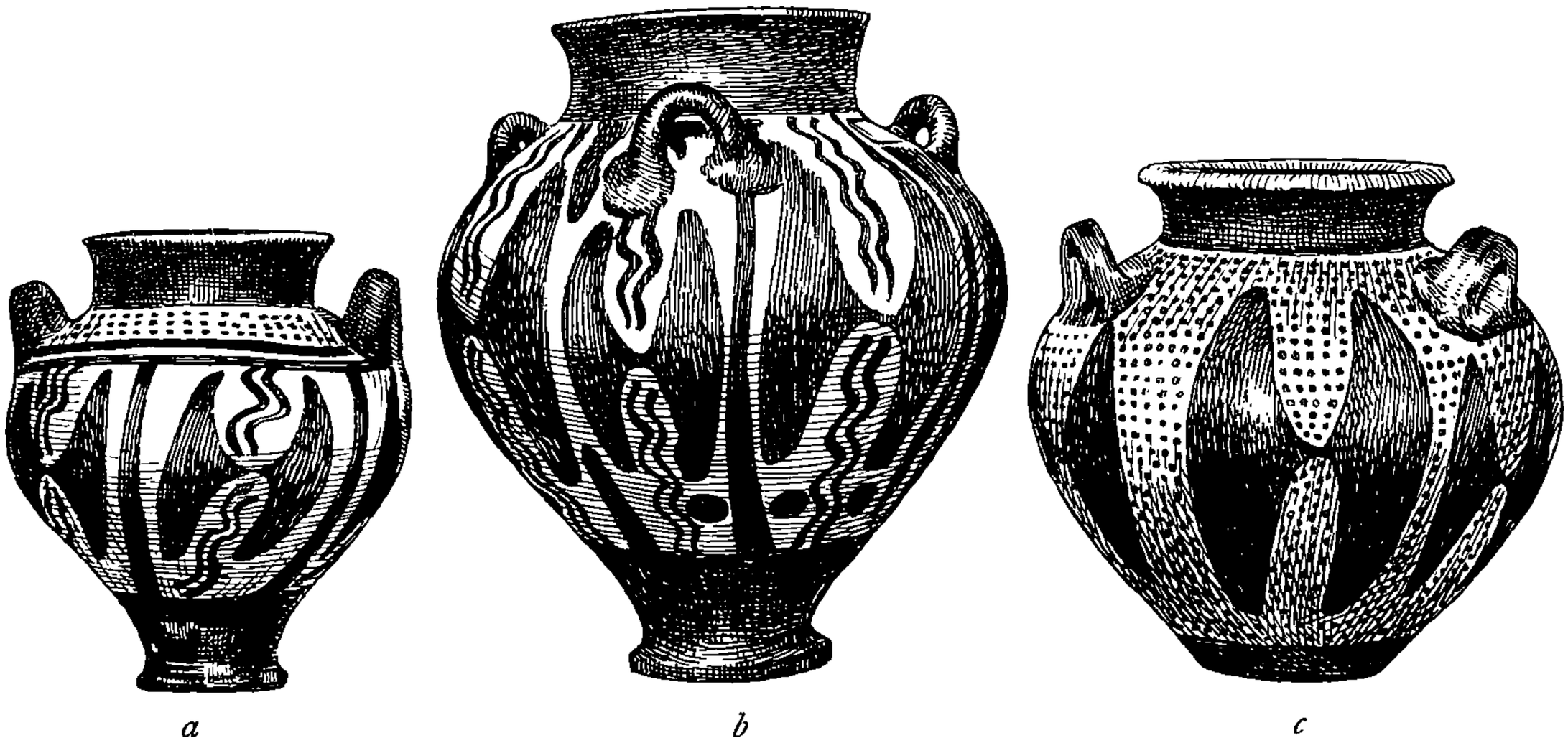
[1] Many remains of this ceramic class were found in connexion with the presumed sanctuary at the South-West Palace angle. Amongst these was the 'amphora', Fig. 215 above, in an advanced marine style and a smaller example with large 'ivy-leaves' (*P. of M.*, ii, Pt. II, p. 485, Fig. 291, *a*). L. M. I *b* fragments also occurred in or near the S.E. House, that of the 'House of the Frescoes' and other houses. Unfortunately the tombs found have as a rule been either earlier or later than this epoch, and the deposits of pottery in the West 'Koulouras' were cut short in M. M III *b* More specimens, however, have since come to light in the 'Temple Tomb' and a small rock chamber near, as well as in the 'High Priest's House'.

[2] See p. 298.

Appendix to § 98: 'L. M. I *c*' and the Late Revival.

1. Mainland, etc., Degeneration of L. M. I *b* Types—'L.M. I *c*'.

The frequency of the Double-Axe motive on L.M. I *b* vases has an interesting sequel in its recurrence in a derivative form on a series of vessels



a *b* *c*

Fig. 227. Vases from Shaft Grave I, Mycenae, showing Bivalve-like Degenerations of Double Axe Motive.

of somewhat later date. The symbol seems to have been affected by the two-stalked 'Sacral Ivy' motive in so far as the original shaft was concerned. Otherwise, the two wings greatly resemble an open bivalve shell, such as a mussel. In this form it still has a good decorative value, and the type itself may be described as more evolutionary than actually decadent.[1]

It is a fact of considerable chronological interest that painted vases of this class, three of which are here reproduced in Fig. 227, should have been found in the First Shaft Grave at Mycenae[2]—constituting, in fact, the latest group of painted pottery found in these graves. In Fig. 227, *c*, indeed,

[1] The forgetfulness of the sacred prototype by the Mainland vase-painters who transformed them into bivalve shells might point to a growing slackness of the Double-Axe cult on that side, where it was itself an exotic feature. The recurrence of the emblem in Mainland Greece in the L. M. III Period of Crete is, however, well authenticated.

[2] G. Karo, *Schachtgräber von Mykenae*, *Atlas*, Pl. CLXVII (partially restored here), Text, p. 68. Cf. Schuchhardt, *Schliemann's Excavations*, p. 187, Fig. 163. This 'mussel' type also occurred in a more fragmentary form on the Acropolis at Mycenae (Fürtwangler and Loeschcke, *Mykenische Vasen* Pl. XXVI, 193).

the two sinuous lines that supplied the last record of the shaft have themselves disappeared. Similar derivative Double Axes are seen, as already noted, on fragments of painted vessels marking the close of the original occupation period of the 'Aegisthos' tomb at Mycenae, on sherds from Korakou near Corinth,[1] from the Boeotian Thebes,[2] and elsewhere.

FIG. 228. *ASKOS* FROM VOLO SHOWING LATE DEGENERATION OF DOUBLE AXE.

On the *askos* from Volo, Fig. 228,[3] we see a distinct degeneration of the 'mussel' type, a reminiscence of the shaft of the prototype being, however, traceable in the dotted line. Though the skin form of this vessel is early this vessel clearly belongs to a later date than those from the First Shaft Grave, reproduced in Fig. 227. A one-handled pot associated with this *askos* (Fig. 203*c*, p. 272 above) shows the late version of the 'Ivy-leaf', with three stalks.

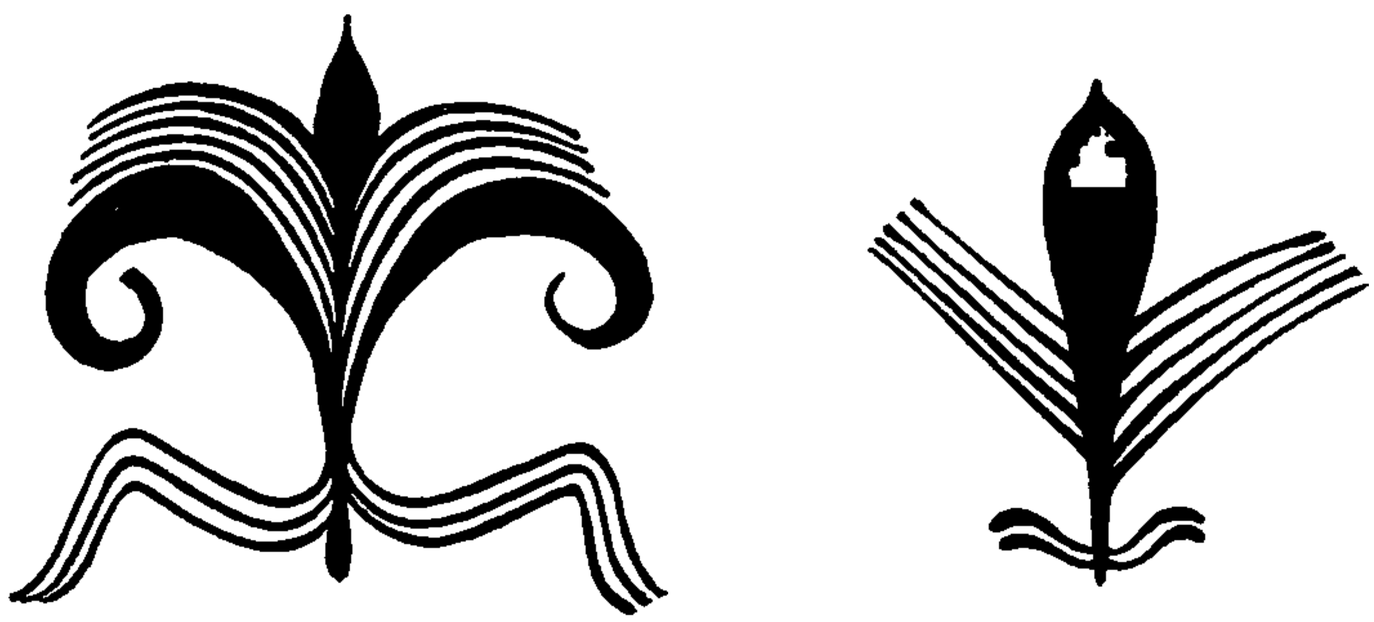


FIG. 229. *a*, THEBES: *b*, KORAKOU, NEAR CORINTH.

To the same ceramic stage to which, from the Cretan point of view, the term 'L. M. I *c*' has been here applied, belong several other types representing later offshoots of the true L. M. I *b* Class, and which, like the foregoing example, occur outside the limits of Crete itself.

The inflorescent date-palm motive of M. M. II tradition appears in a hardly recognizable shape as a spray without a trunk (Fig. 229, *a*, *b*). Lily types undergo a similar degradation. The curious deformation of the

[1] G. W. Blegen, *Korakou*, p. 47, Fig. 63, 1 and 5 (there described as 'Late Helladic II').

[2] Ἐφ. Ἀρχ., 1910, p. 228, Fig. 17, *a*.

[3] Kurt Müller, *Mykenische Vasen aus dem Nordlichen Griechenland* (*Ath. Mitth.*, xiv, 1889), Pl. XI, 1, and see p. 266, where this and the Mycenae types as well are described as 'shells' pure and simple. This had formerly been my own impression, but it is impossible to doubt that the Double-Axe type stands at the root of all these versions.

elegant crocus pendants of the L. M. I *b* style on a Rhodian 'amphora' of this epoch has already received illustration (Fig. 223, p. 288).

In view of these parallels, moreover, the bowl with marine motives (Fig. 230 [1]), found with the vases showing the 'mussel' form of the Double Axe, in the First Shaft Grave at Mycenae, falls into its natural place. Though of exceptionally rude fabric,[2] it should not merely be regarded as a rustic example of the same approximate date as the elegant L. M. I *b* ewer from the same Grave. Its degraded argonauts and 'brittle stars' reduced to mere four-spoked wheels in truth belong to the same class as the bivalve-axes. It seems best to look upon it like the others as a more or less normal example of the Mainland fabrics belonging to the succeeding epoch. This epoch corresponds with the break-up on that side of a unitary Minoan domain, the overseas regions being now largely cut off from the insular area where the old civilization had deeper roots and greater vitality.

FIG. 230. BOWL WITH DEGENERATE MARINE MOTIVES ('L. M. I *c*') FROM FIRST SHAFT GRAVE AT MYCENAE.

So it happened that, while at Knossos itself the great Palace was still capable of becoming the focus of a new and brilliant artistic style, we discern at Mycenae and, beyond the Corinthian Gulf, at such important centres as Thebes the evidences of a dull traditionalism in ceramic decoration. The fine 'amphoras' of the preceding Age—such as we see at Kakovatos and Mycenae—give place to smaller vessels, which in themselves offered little scope for decorative composition.

Yet, as far as they can be traced, the 'L. M. I *c*' motives themselves go back to Cretan sources. Many of the prototypes of the ceramic designs may, as already shown, be eventually traced back to the flowery landscapes seen on the fresco panels of the Middle Palace at Knossos. In some we see a reminiscence of the beaded festoons and floral pendants of their toilette scenes, others incorporate in a concealed form early religious symbols —the papyrus wand taken over from Egypt or the Double Axes of the indigenous cult. To call this style in any cultural sense 'Helladic' is to ignore the whole history of Minoan Art. It is fundamentally an appendage of

[1] From Karo, *Schachtgräber*, *Atlas*, Pl. CLVIII, 197.

[2] Dr. Karo, *op. cit.*, i, p. 69, describes it as 'locale Arbeit nach minoischen Vorbildern'.

L. M. I *b*, and the term above suggested for it seems best to accord with scientific fact.

2. The 'Late Revival'.

It was only at a somewhat later date—owing to the infusion, we may well suppose, of new and vigorous blood—that fresh life and creative force makes itself apparent among the older elements. The succeeding 'Metope' motives—themselves derivatives, *per saltum*, of an architectonic branch of the Knossian L. M. II 'Palace Style'—are for the most part jejune and dull enough, but, for instance, among the vases of the 'Granary' group at Mycenae, there emerge types that show a renewed faculty of composition and a certain strength and swing in the decorative schemes.

That this revitalized style was shared by Crete is well shown by the Stirrup-Vase, Fig. 231, *c*, from the outer niche of the 'Royal Tomb' at Isopata and by the spouted mug, Fig. 248, from the Dictaean Cave. It was brilliantly represented in Rhodes and appears in Cyprus and other transmarine areas. Its motives are purely ornamental and far removed from the earlier, naturalistic models of L. M. I and M. M. III. But dead forms now became living patterns. In place of the mere geometrical extension of its undulating arms the octopus gives birth to a series of really decorative figures (Fig. 231, *c*),[1] and even the uncoiled whorls of the murex-shells are pleasingly adapted. The argonaut—already so flat and lifeless on the bowl from the First Shaft Grave, Fig. 230 above—forms the starting point of a series of spirited scroll-patterns (Fig. 231, *d*). The water-fowl, which in the late 'Palace Style' had become little more than bizarre caricatures, now attain—at least in the Rhodian example (Fig. 231, *e*)—a real stylistic merit. Other types, moreover, of more complex origin, such as those seen in Fig. 231, *a*, *b*, produce a bold ornamental effect.

A psychological change is also visible. The taboo of human figures in the painted decoration of vases, of which we have evidence from the beginning of the Middle Minoan Age, is now gradually removed. The culmination of the new 'Mycenaean' style is thus reached in the 'Warrior Vase', and we see the forerunners of a long 'Geometrical' series which merges in that of Classical Greece. But the chariot scenes on these were ultimately derived from a Minoan source. That those which now appear on 'kraters' in Rhodes and Cyprus were of Cretan origin is clear from the fact that the cars are alternately drawn by horses and by winged monsters,[1] as at the opposite ends of Hagia Triada Sarcophagus itself, perhaps late

[1] Cf. too, p. 313, Fig. 249*a* and p. 373, Fig. 311. For a good series of octopus types assuming a pillar form see C. W. Blegen, *Zygouries*, p. 146, Fig. 137.

L. M. II.[1] So too certain details peculiar to the 'Palace Style' of Knossos, described below, were incorporated in the new ornamental schemes.[2]

FIG. 231. VASE DECORATION ILLUSTRATING 'LATE REVIVAL'. *a*, *b*. MYCENAE (*B.S.A.*, XXV, Pl. VII *a*, AND IX *b*). *c*. EXTERIOR NICHE OF 'ROYAL TOMB', ISOPATA. *d*. IALYSOS, RHODES (MAIURI, p. 121, FIG. 186). *e*, *Ib.*, p. 29, Fig. 31.

The fantastic spirit that now infuses a new life into the old decorative elements curiously recalls that by which traditional classical motives were transformed at the hands of Celtic craftsmen in the days of the Gaulish invasions.

[1] R. Paribeni, *Mon. Ant.*, xix, Pl. III.
[2] E.g. *B.M. Excavations in Cyprus*, Fig. 71, 927; Tomb 45 (Salamis).

§ 99. The 'Palace Style' Pottery of L. M. II.

Knossos the exclusive source of the finest outstanding achievement of Late Minoan ceramic Art; Reflection of a still powerful dynasty; Growing influence of M. M. III Ceramic types outside Crete; L. M. I a *style shared by Mainland; Knossian 'Palace Style' of L. M. II—an enclave in L. M. I* b*; Sources of these palatial fabrics; Metal-work models—imitation of foliated edges, shield-headed rivets, and repoussé bands; Prototypes in precious metals; Reflection of frescoes; Monumental character of 'Palace Style'; Marine motives—octopus types; Process of Conventionalization; 'Triple C' ornament on 'Palace Style' Vases—its marine derivation; Whorl-shell motives—*triton *as well as* murex*—later evolutions;* Tritons *associated with ritual objects; Survival of 'Sacral Ivy' and 'Ogival Canopy' on 'Palace Style' vases; Overlapping of L. M. I* b *and Palatial style; Composite plant motives and their sources; Anticipation of decorative style in Iris sprays of Priest-king Fresco; Elements drawn from papyrus, reed, palm-trees, and lily; Papyrus clumps on jar from 'Royal Villa'; Echoes of Nile-bank scenes—ducks on 'Palace Style' amphora from Argos and a somewhat later Knossian example; L. M. III versions of Nilotic motives; Absence of imported L. M. II pottery in Egypt but abundant evidence of Egyptian imports; Architectonic features on 'Palace Style' vases—L. M. I* a *fresco bands imitated; Influence of 'Shield Frescoes'; Double Axes and other Cult objects reproduced; Sacred Trees, conch shells and 'rhyton' type; Gold Votive Double Axes from Cave sanctuary; Motives taken from frescoes depicting Pillar Shrines of Double-Axe Cult—Chequer work of façades; Pillar-shrine motives appear* per saltum *on late bowls from Mycenae; General relationship of 'Palace Style' fabrics to those of Mainland Greece.*

Growing influence of M. M. III ceramic types outside Crete.

We now approach what, so far as the great Minoan Palace is concerned, must be regarded as its most individual achievement in the domain of ceramic Art. Knossos itself, indeed, has a more exclusive claim to the stately style evolved in the latest Age of the great Palace than to any preceding phase and its magnificence reflects the lustre of the last dynasty of Priest-kings that exercised their sway from this centre. There are signs, indeed, that their dominion was not altogether confined to the insular sphere.

The earlier ceramic styles of Crete, from Neolithic days onwards, had been largely shared throughout the Island. In the Middle Minoan Age they begin to affect a wider area. M. M. II painted wares were not only

imported into Egypt, but already occur on the sites of Mainland Greece from the Southern coasts of the Argolid to the Helladic Castle of Aegina. In the Third Middle Minoan stage the Minoan potters were supplying the models for derivative local fabrics, not only in the Cycladic Islands as at Melos, where there was already a colonial plantation, but in Mainland sites like Mycenae itself. The first wave of what may be regarded as actual conquest in that direction—which itself can be traced back to the close at least of M. M. III—had greatly intensified this intrusive process. Already in the earlier L. M. I phase it is often hard to say whether a given vase is indigenous or imported, so identical are forms and designs. The brilliant decorative compositions of the succeeding L. M. I *b* style are, as has been shown, common to a very extensive Minoan area that includes a considerable tract North of the Corinthian Gulf.

L. M. I *a* style shared by Mainland.

Then, in the epoch that immediately heralds the last palatial Age of Knossos, this widespread community of fabric is somewhat abruptly broken up. The traditional L. M. I *b* style, in the decadent aspect above described, is still somewhat mechanically preserved on the Mainland side, while at Knossos there rise into view the products of a truly palatial class, in its way more stately and magnificent than anything that had preceded it.

Knossian 'Palace Style' of L. M. II—enclave in L. M. I *b*.

In the Knossian Palace itself there had indeed, in the great days of M. M. II polychromy, been an earlier ceramic class well deserving of the same title. It was also shared by Phaestos, but its most exquisite fabric, the 'egg-shell' bowls and cups, with their delicate flutings and reliefs and brilliant metallic lustre reflecting the gold and silver plate of the Palace treasuries,[1] was practically confined to Knossos. An analogous class of vessels imitating metal-work also occurs in connexion with the later 'Palace Style' with which we are here concerned.

Earlier palatial types of M. M. II.

The new fabrics, which about the middle of the fifteenth century B.C. supersede the L. M. I *b* series in what by this time had become to an overwhelming degree the centre of dominion of the Minoan Priest-kings in Crete, were largely of a more imposing calibre. This later class, from its outstanding character and from the singular example that it presents of artistic development in a general atmosphere of stagnation, has well maintained its claim to the title of the 'Palace Style' *par excellence*, already applied to it when the monumental remains of the great jars and 'amphoras' of this kind were first excavated at Knossos in the West Quarter of the great building.[2]

Sources of L. M. II Palace fabrics.

[1] See especially *P. of M.*, i, p. 240 seqq.

[2] See A. E., *Knossos, Report*, 1901 (*B. S. A.*, vi), where I described this class as 'Mycenaean' painted pottery of the 'Palace Style'.

Knossian Find-spots of 'Palace style' Vases.

These fine vases, which represent the acme of the L. M. II style, were largely found in connexion with what was clearly a Sanctuary Hall by the North-West corner entrance to the Palace. Their remains lay above the floor-level of the underlying Magazines and along the neighbouring border of the West Court. Another conspicuous find-spot was immediately below the South-West angle of the Palace, the remains being derived from some important chamber on that side, also, probably, serving a religious function, of which no record has been preserved. Some 'Palace Style' 'amphoras' and other smaller vessels of the same class occurred in the 'Royal Tomb' at Isopata [1] as well as in that of the 'Double Axes'.[2] In the recently discovered 'Temple Tomb' South of the Palace, pottery belonging to the very latest L. M. II category was found in connexion with the secondary interment in the corner pit,[3] supplemented by others of the succeeding L. M. III phase that seem to have served a memorial cult. Smaller painted clay vessels, representing in a humbler form the palatial L. M. II class, were widely distributed at Knossos both on the sites of the Town and Palace and in the surrounding cemeteries.

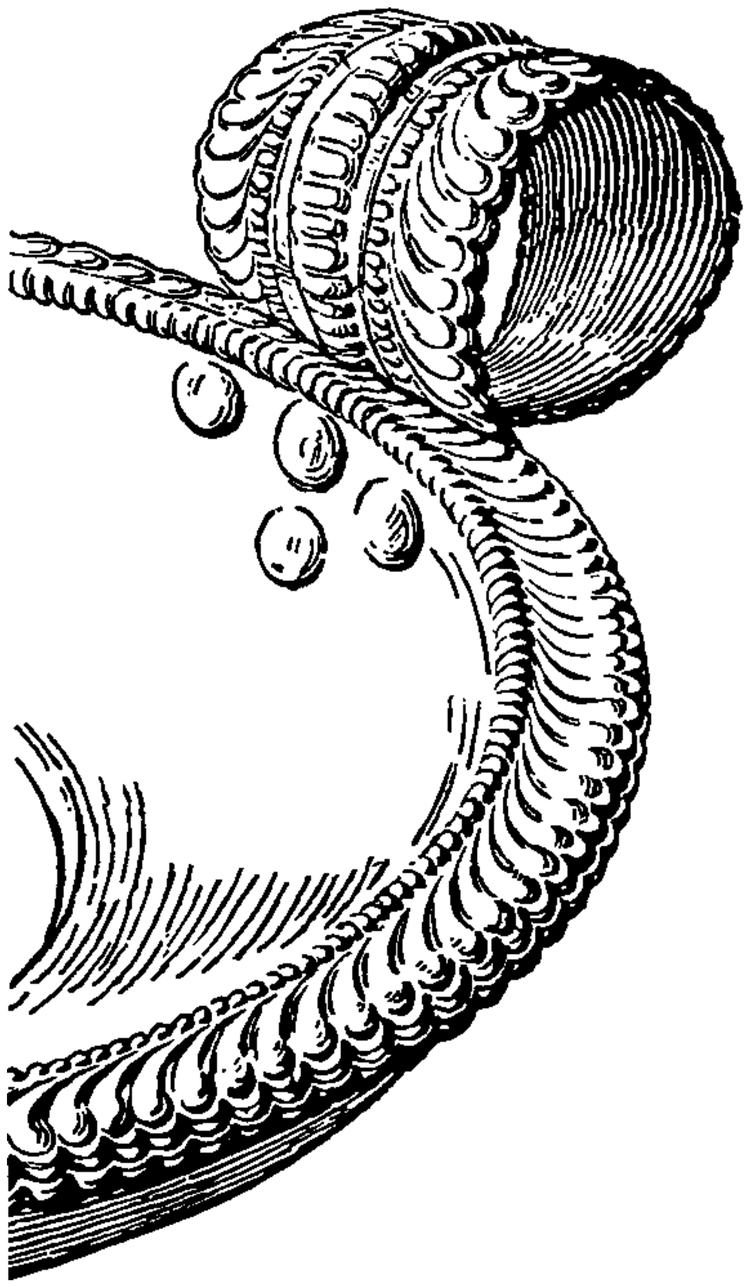


FIG. 232. SECTION OF BRONZE BASIN SHOWING CHASED RELIEF OF FOLIATION.

'Palace Style' Motives derived from Metal-work.

'Palace Style' motives derived from metal-work.

Just as the earlier palatial class of vessels, above referred to, reflected the gold and silver plate of the Priest-kings of Knossos in the M. M. II Period, many of the painted vases in this later 'Palace Style' in the same way betray their dependence on metal-work models.

A fine 'amphora' from the *dromos* of a Chamber tomb at Mycenae (see above, p. 282, Fig. 216, and p. 284, note 1, and Bosanquet, *J. H. S.*, xxiv, Pl. XIII), mentioned there as belonging to the same class, is included above in L. M. I *b*. This L. M. I *b* class, though doubtless once well represented in the palatial halls of Knossos, is itself too widely diffused to be included, as in my original classification, under the term of 'Palace Style', and thus merged with L. M. II.

[1] A. E., *Prehistoric Tombs of Knossos*, i (*Archaeologia*, lix, 1906), p. 157 seqq., and Plates C, CI.

[2] E.g. below, p. 309, Fig. 244 *a*.

[3] A. E., *Tomb of the Double Axes, &c.* (*Archaeologia*, lxv, 1914), p. 47 seqq.

In the case of a series of pedestalled goblets, to be more fully described in a Supplement to the present Section, we have the actual evidence of prototypes in precious metals. The fine foliated bands chased on the splendid

FIG. 233. SHOULDER OF 'AMPHORA' FROM 'ROYAL TOMB' WITH REDUPLICATED FOLIATION.

FIG. 234 *a*. 'STIRRUP VASE', ZAFER PAPOURA, WITH MULTIPLE FOLIATED EDGES.

bronze basins belonging to the preceding Age from the North-West Treasury Building, with their reduplicated edges,[1] are closely imitated on 'amphoras' and other vessels. Part of a shoulder of an 'amphora' from the 'Royal Tomb' at Isopata is here reproduced in Fig. 233, while a section of a bronze basin from the North-West Treasury is shown in Fig. 232. These reduplicated edges of foliation are repeated to a still further extent on the 'Stirrup Vase', Fig. 234 from Tomb 68 of Zafer Papoura.[2]

Reduplicated edges of foliation.

The literal reproduction of details of metal technique in these and other cases is sufficient proof that the fabric of the 'Palace Style' vases on which they occur had been executed at a time when their models in bronze or precious metals were still in vogue. Since such fine works as the bronze

[1] See *P. of M.*, ii, Pt. II, pp. 639, 640, and Fig. 403.

[2] A. E., *Prehistoric Tombs of Knossos*, i, p. 74, Fig. 83, and pp. 121–3, with Fig. 115. The 'three C's' ornament traced below (pp. 314, 315) to a triple group of marine objects characteristic of the L. M. I *b* style appears fully evolved on this vase which must therefore belong to a mature stage of L. M. II. We have here a proof of the persistence of the foliated decoration, which indeed survives in a somewhat inferior style in L. M. III *a* (cf. *Tombs of Knossos*, p. 63 [453], Fig. 67, p. 67 [457], Fig. 73).

vessels from the North-West Treasury themselves go back to the very beginning of the New Era, their reflection on this palatial class of painted clay vessels has considerable chronological significance. As shown below,[1]

FIG. 234 *b*. UPPER PART OF 'STIRRUP VASE' FROM SHAFT GRAVE NO. 68
ZAFER PAPOURA.

FIG. 235. UPPER PART OF 'STIRRUP VASE', SHOWING MINIATURE SHIELD, 'HIGH PRIEST'S HOUSE', KNOSSOS.

the beginnings of this 'Palace Style' in fact considerably overlap the products of the L. M. I *b* class.

Shield-like bosses derived from rivet-heads.

A further interesting piece of evidence as to the metallic source that in certain cases lies behind painted clay vessels of the latter type is supplied by the small prominence on the left shoulder of Fig. 234 *a*. This knobbed object, as is better shown in Fig. 234 *b*, represents a small eight-shaped shield and answers to a method of decorating metal surfaces illustrated by the gold-plated rivet-heads of this form with which the upper margin of the silver 'rhyton' from the Fourth Mycenae Shaft-Grave was studded.[2] On the section near the hilt of a bronze sword blade from the same Grave are executed a series of similar reliefs (Fig. 236).[3] A shield in relief is seen on the upper part of another painted 'Stirrup Vase', also of L. M. II date (Fig. 235), and with a characteristic 'Palace Style' rosette at top, from the recently excavated 'House of the High Priest' at Knossos. In this case the

[1] See below, p. 358.

[2] See *P. of M.*, iii, pp. 89–92, and Fig. 50 *c* (for the best technical description of this 'rhyton', see now G. Karo, *Schachtgräber*, i, pp. 106–8).

[3] G. Karo, *ib.*, p. 99, No. 404 and Atlas, Pl. LXXXV. From a drawing by E. Gilliéron, fils.

shield, as usually in painted designs, shows the spots of the original ox-hide. Such little shields suggested, perhaps, by the form of *pithos* handles, were also used at this time to adorn surfaces of other materials such as ivory and alabaster. A good illustration of this is to be seen in the ivory shields attached to the lid of a casket from the 'Tomb of the Tripod Hearth' at Zafer Papoura (Fig. 237).[1]

Imitation of repoussé bands.

A metallic suggestion is visible in the foliate bands that surround the shoulders of several other 'amphoras' in the 'Palace Style'. But the specimen on which metallurgic motives are most fully developed is that from the 'Royal Tomb', illustrated in Fig. 238.[2] Here, beneath the foliated ring round the neck, is a further zone, the decoration of which is clearly based on repoussé work. This includes the particular linked ornamental series described above that was based on the 'canopied *waz*',[3] and the double rows of connected running spirals familiar on the Mycenae gold plates.

Prototypes in precious metals of pedestalled goblets.

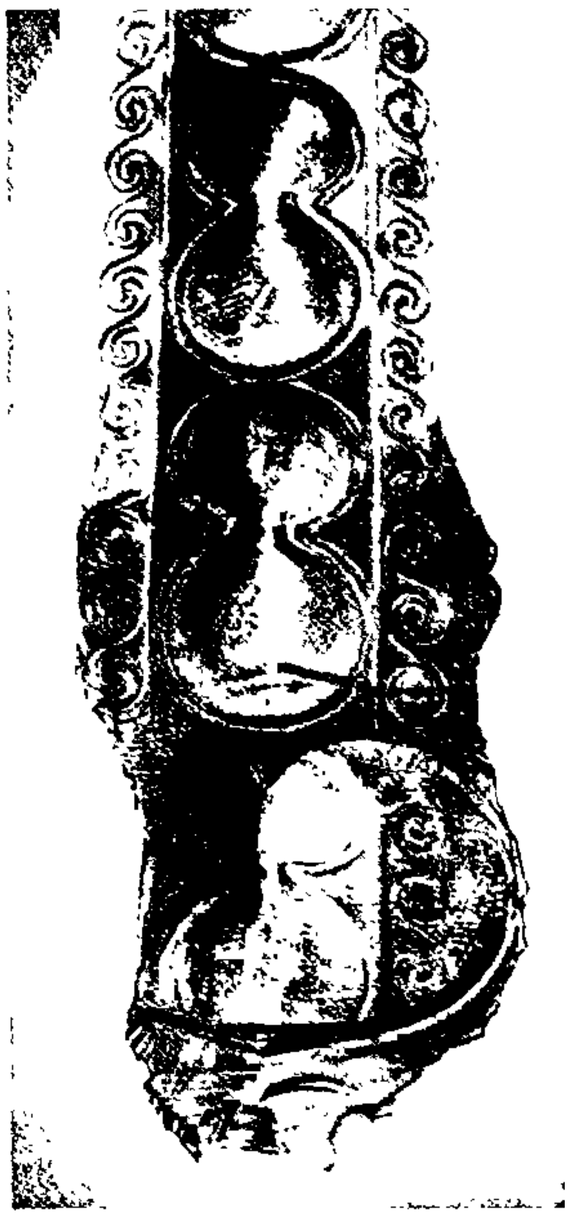


FIG. 236. TOP PART OF SWORD BLADE, NEAR HILT. FOURTH SHAFT GRAVE, MYCENAE.

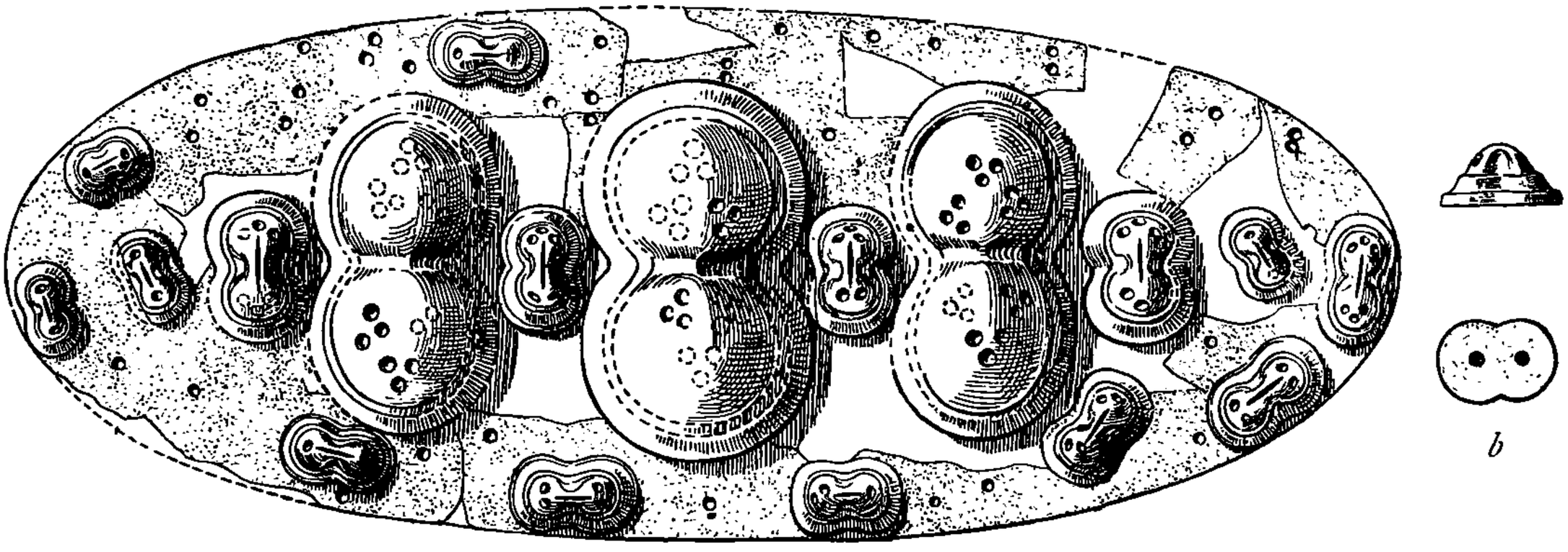
Smaller vessels of a class of which a special account is given below [4]—

[1] *Preh. Tombs of Knossos*, i, p. 44, Fig. 41.

[2] *Ib.*, p 158, Fig. 143.

[3] See especially *P. of M.*, ii, Pt. II, p. 480, Fig. 287, and p. 492, Fig. 297, *a*, *b*.

[4] See below, p. 353 seqq.



a *b*

FIG. 237. *a*, IVORY LID WITH SHIELD BOSSES, TOMB OF 'TRIPOD HEARTH', ZAFER PAPOURA, KNOSSOS; *b*, IVORY BOSS.

the two-handled pedestalled goblets—seem to have had a special connexion with ritual types, which, in the Palace Treasuries at least, were of precious metals. That seen in the hands of a votary in the 'Camp-stool Fresco' [1] seems to have been of silver, and a chalice-like cup was of gold. But a class of bronze and silver goblets also existed for ordinary use of which the evidence is not wanting.

FIG. 238. 'AMPHORA' FROM 'ROYAL TOMB', ISOPATA, WITH METALLURGIC MOTIVES ON SHOULDERS.

Reflection of Fresco Models on the Palace Walls.

In a series of cases, ceramic types betray the influence of earlier models on the Palace walls. The reflection of the 'marine' style so clearly perceptible in L. M. I *b* survives into the last 'Palace Period', and so far as the octopods and *murex* shells go, even beyond it. At the same time the conventionalized floral and foliate variations of the L. M. II 'Palace Style' fully harmonized with the decorative fashions then in vogue of the rooms themselves. In the light of furniture many of these palatial vases with their papyrus patterns would have admirably harmonized with the flowery thickets behind the couchant griffins in the 'Room of the Throne'.[2] The 'unities' in short were observed.

Sacral Suggestion of 'Palace Style' Motives.

Sacral suggestion of decorative motives on Palace walls.

But the Palace was also a Sanctuary and the imitative features taken from its walls had also a sacral association. The 'marine' style itself had a special appropriateness to the Minoan Goddess as Mistress of the Sea—the forerunner, as we have seen, of Hagia Pelagia[3]—whose shrines were floored

[1] See Pt. II, Coloured Pl. XXXI, and pp. 389, 390, Figs. 324, 325.

[2] See below, § 115.

[3] *P. of M.*, ii, Pt. I, pp. 251, 252.

with sea-shells. So, too, the papyrus wand of Egyptian cult, incorporated in the Sacral Ivy-leaves and '*waz*' lilies, could not have altogether lost its inherent virtue. The adder mark of the Goddess is still repeated on their rims and margins. The Double Axes on the great Palace jars speak

FIG. 239. PART OF LARGE VESSEL SHOWING DOLPHIN AND MARINE SPRAYS.

for themselves. Of special import is the appearance of a motive reflecting architectonic features of the columnar shrine itself with the ritual weapons stuck into its pillars.

A taboo long prevailing in the potters' craft prevented the insertion of human figures in the designs on the vessels and this also debarred the direct allusions to divinities such as are seen on Greek painted vases. But the hallowing element was nevertheless infused into these palatial fabrics by these more subtle methods.

Many of the consecrating elements on the new palatial fabrics are indeed simply taken over from the preceding L. M. I *b* class and some of them, like the old papyrus wand of the Delta Goddess, had been incorporated in Minoan ornament from a much earlier date.

Monumental character of 'Palace Style' designs.

In the presentation of the designs on the 'Palace Style' vases a changed attitude is at once perceptible. The aim was not so much picturesque beauty as stateliness of effect. There is a tendency to sup-

press details, as when we see the graceful trefoil clusters of sea-tang familiar in the L. M. I *b* 'marine' style reduced to mere symmetrical formulas in the field.[1] The designs, instead of being almost evenly interwoven over the whole surface, centre more and more in some leading motive or divide themselves into imposing groups. In a word the style is monumental.

Marine Motives of 'Palace Style': Dolphins.

There is some fragmentary evidence that fish, which played an important part in the ceramic decoration in the transitional M. M. III–L. M. I phase, occasionally served the artists of the 'Palace Style' under a less naturalistic aspect. Fig. 239 shows a part of the shoulder and collar of a fairly large vessel, though not an 'amphora', from the West Palace borders, depicting a succession of dolphins with intervening wisps of some marine vegetation, subjects being mechanically repeated in the same transverse direction. As an indication of date the dotted triangles with one side open in the middle are of special value since they constantly recur on typical L. M. II pottery.[2]

Marine Motives of 'Palace Style': Octopus Group.

Marine compositions with Octopods.

The most prominent feature, however, in marine composition, inherited from the L. M. I *b* style, was the octopus, and it is characteristic of this grandiose phase of Knossian ceramic art that this should rapidly detach itself from its surroundings and finally usurp the whole field.

More naturalistic type of L. M. I *b*.

What in some ways may be described as a transitional type on an 'amphora' of the L. M. I *b* class, found outside the South-West Palace angle, has been already illustrated in Fig. 215, p. 280. On each side of this an octopod sprawls over the whole field, the background of which is composed of rocks and sea growths, to the exclusion of other living creatures.

An 'amphora', belonging to the earlier phase of the succeeding L. M. II class with which we are here concerned, from the North-West border of the Palace (Fig. 240),[3] shows in the sections of its circumference, divided by its three handles, a succession of these cephalopods in alternating transverse positions, the coiling arms of which are confined within the curved outlines of what may be interpreted as sea-shore pools. They are, in fact, sur-

[1] See below, p. 313, and Fig. 250.

[2] On a globular flask from the late interment of the Temple-Tomb at Knossos bands of this 'broken triangle' are associated with an interspace presenting the three 'C's' ornament, a special mark of L. M. II. See below, p. 313 and Fig. 250.

[3] The remains of this 'amphora' were presented to me by the Cretan Government and have been since set up in the Ashmolean Museum at Oxford. The lower part is restored.

rounded by masses of stippled work such as in the wall-paintings of the 'House of the Frescoes' represent the yellow sea-sands.[1]

FIG. 240. 'AMPHORA' WITH OCTOPODS IN SANDY POOLS; NORTH-WEST PALACE BORDER (L. M. II *a*).

All the varied and intricate details of rocks and sea-tang—often so beautifully developed in the L. M. I *b* 'marine' style—are reduced by this plan to a monotonous background against which the octopods in their open pools stand out. One other sea creature is indeed here depicted on a quite secondary scale, the whorl-shell, Fig. 241—probably a *Murex*—visible by the left handle of the vessel.[2] It is interesting as fitting on the earlier, naturalistic versions of this object and is still far removed from its corkscrew degenerations. The cephalopods themselves also preserve on their arms a record of the rows of suckers, generally altogether absent in similar designs on 'Palace Style' vases.

Arms of Octopus reduced to six.

The central subject of the 'amphora' must clearly be regarded as an 'octopus', notwithstanding the fact that, as is not infrequently the case, the arms are here reduced to six. Though these are in no case intertwined, as in their more naturalistic models, the general effect of their alternating

[1] See *P. of M.*, ii, Pt. II, p. 501, Fig. 305. For a good L. M. I *a* ceramic example compare the cup from Knossos, B.M. Cat., p. 103, Fig. 132 (A 634).

[2] On the right shoulder of the amphora (as seen in Fig. 240) there also appears an imperfect three-lobed object, which represents the abbreviated equivalent of the sea tang, &c. Compare pp. 314, 315 below, and the Comparative Table, Fig. 250.

transverse positions is not unpicturesque. This may also be said of the closely similar design of Fig. 242, of the same provenance,[1] where the

FIG. 241. *MUREX* SHELL IN SAND-GIRT POOL, BESIDE OCTOPUS ON 'AMPHORA', FIG. 240.

octopus—arranged in a similar slanting position—is again represented with only six arms. The suckers have here entirely disappeared.

Patches of the stippled sand motive are shown, but the little islets of these seen between the tentacles in Fig. 240 are here replaced by an ornament consisting of a triple group of C's, with accompanying dots, which, as will be shown below, are of great interest in their relation to the decorative evolution of the earlier marine elements.

On the amphora, Fig. 243, from the 'Royal Tomb' at Isopata,[2] where a six-armed octopus is again seen embedded in surrounding stipple-work, the same symbol appears in its simplest form, without dots, enclosed in a double

[1] In the Candia Museum.

[2] *Preh. Tombs of Knossos* (*Archaeologia*, lix), p. 156, Pl. C, and Fig. 141 *b*. As restored, its height is 67·5 cm.: diam. 49·5 cm.

circle. In the adjoining field marine elements, such as the stipple-work and a small argonaut motive, are combined with conventionalized papyrus and

FIG. 242. 'AMPHORA' FROM NORTH-WEST PALACE BORDER (L. M. II *b*).

FIG. 243. 'AMPHORA' FROM 'ROYAL TOMB' AT ISOPATA (L. M. II *b*).

lotus sprays.[1] A variant of the above type, with three six-armed octopods, in separate enclosures within a stippled field, as in Fig. 243, occurred on another Palace 'amphora' found on the North-West Sanctuary borders.[2]

Octopus designs of a similar character begin to occur on the pedestal goblets of the Palace Style. Examples of these are given below from the South-West Palace angle.[3] We see here the predecessor—itself displayed in a fairly natural manner—of a much later series of symmetrical octopods that are found on the stemmed goblets of the succeeding period.

In the 'amphora', Fig. 244, from the Tomb of the Double Axes,[4] where

[1] A further fragment of this vase showing a lotus spray is reproduced in Fig. 258, p. 319. The 'sun-flowers' there seen within the coils are perhaps derived from the facing lotus flower as seen in Egyptian decorative Art.

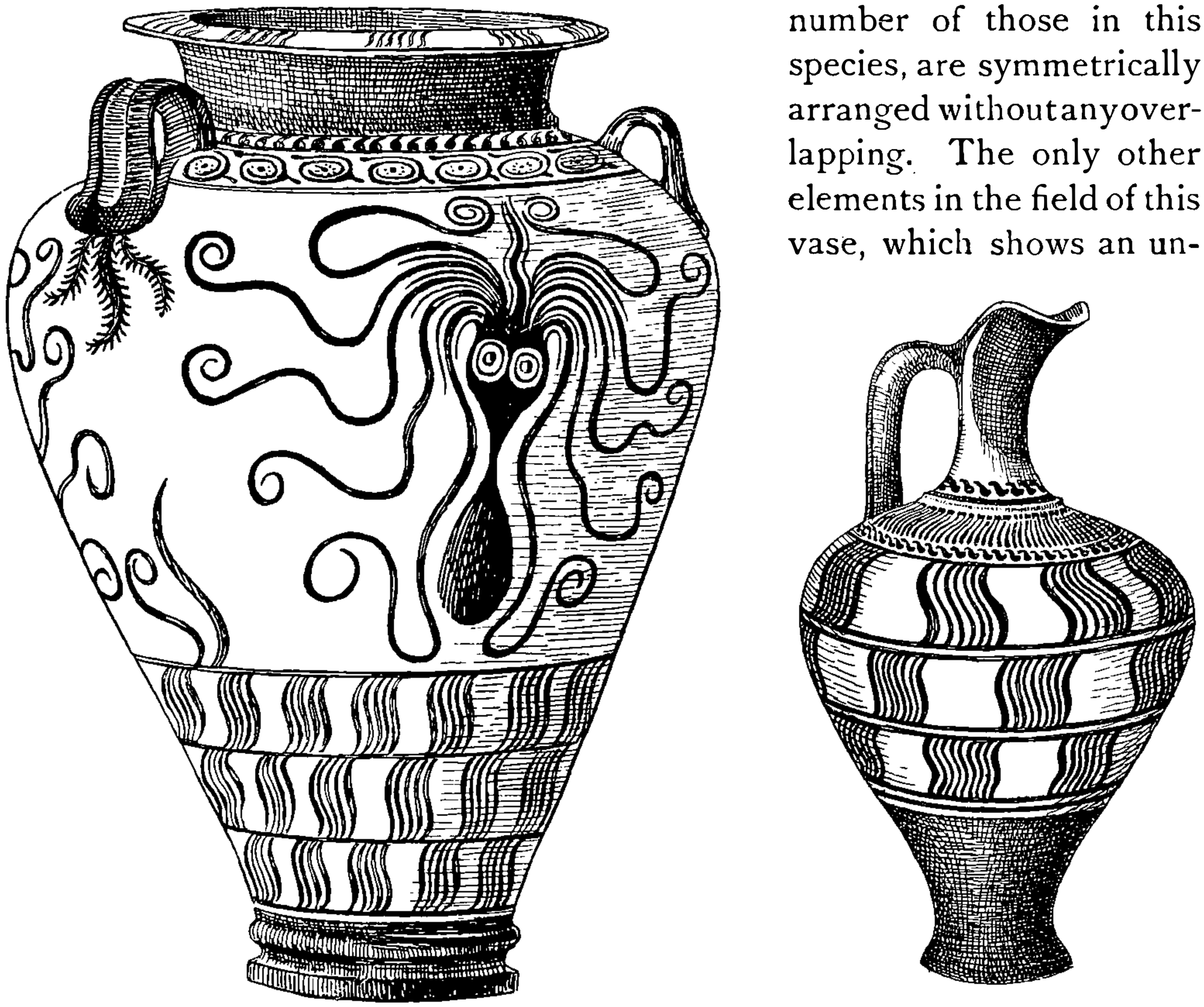
[2] Now in the Candia Museum.

[3] See p. 362, Fig. 302 *b*.

[4] *Tomb of the Double Axes, &c.*, p. 48, Fig. 63 (Candia Museum).

ten separate tentacles are carefully delineated, we may preferably recognize a *Haledon* rather than an octopus. The tentacles here, answering to the number of those in this species, are symmetrically arranged without any overlapping. The only other elements in the field of this vase, which shows an unusual reserve, are the sprays of sea-weed descending from the handles and a stray wisp of sea-grass below.

Ten-armed type: *Haledon*.



a *b*

FIG. 244. *a*, 'AMPHORA' FROM 'TOMB OF THE DOUBLE AXES' SHOWING *HALEDON* WITH TEN TENTACLES (L.M. II *b*); *b*, BEAKED JUG FROM SAME TOMB.

The lower zones of this vessel exhibit a waved linear pattern that recurs on the jug, Fig. 244, *b*, from the same tomb. On the one hand, this obviously represents a later phase of the L. M. I *b* pattern shown in Figs. 208, 209, p. 275 above. On the other, it runs parallel with the contemporary L. M. II conventions for rockwork shown in section, a good example of which is given below in that depicted beneath a bull's foot in the fresco remains on the South wall of the Antechamber leading into the 'Room of the Throne'.[1]

[1] See below, § 116, and cf. *Tomb of Double Axes, &c.*, p. 46, Fig. 61.

This pattern recurs on the borders of the painted terra-cotta bath of the 'Queen's Bathroom',[1] one of the latest relics of the 'House of Minos'.[2]

Progressive disappearance of Natural Elements in the Octopus Type: Degenerate Offshoots, Cretan and Mainland.

Process of conventionalization.

It will be seen that in the true 'Palace Style' series of cuttle-fish types, and those that follow on to them, the varied natural details are lost or geometrized. Pattern is largely substituted for design; the encircling rock or sea-weed is simplified into triple curves, the suckers on the tentacles disappear or survive in lines of dots, and the arms themselves become waving bands, more and more symmetrically balanced and terminating in decorative coils. Extraneous elements, such as papyrus sprays, at times invade the field.

One universal characteristic of the present series is that the tentacles are not to any extent intertwined as on the Gournià stirrup vase and, more fully, in such noble examples as the ambushed 'octopus'.[3] They are each separately rendered as if they had been combed out. This conventional feature is even observable on the fine repoussé relief from the Royal Tomb at Dendrà,[4] where the natural features are otherwise exquisitely reproduced.

Later types with prolonged sinuations.

With the final overthrow of the great Palace at Knossos there was no call for the stately 'amphoras' that had been the principal vehicle for these broadly displayed designs of cephalopods. On a smaller scale, indeed, the 'amphora' type persists throughout a large part of L. M. III, but the octopus for the most part now finds its place on what now appears to have been the largest kind of vessel in general use, the capacious two-handled bowls, to which the name 'krater' may best be applied, that come into prominence in the immediately succeeding epoch. These, with their broad handles, are unquestionably the clay derivatives—lower in height and with wider mouths—of the bronze 'hydrias' of L. M. I fabric, fine imported Minoan examples of which were found in Cyprus, Fig. 245.[5] To these 'kraters' may be added certain tall 'stirrup-vases'. Still wider space, how-

[1] *P. of M.*, iii, p. 385, Fig. 256.

[2] Cf., too, the 'amphora', *Ibid.*, p. 387, Fig. 258.

[3] *Ibid.*, ii, Pt. II, p. 503, Fig. 307. Cf., too, *ibid.*, p. 509, Fig. 312 *c* (*Gournià*), *d* (*Palaikastro*).

[4] A. W. Persson, *Kungagraven i Dendrá*, p. 73. The execution of this beautiful repoussé design cannot, however, surely be later than the most flourishing epoch of L. M. I *b*.

[5] *P. of M.*, ii, Pt. II, p. 652 seqq., Figs. 417–19.

ever, for the coiling arms of the octopod was at the same time supplied by the contemporary clay coffins or *larnakes*.

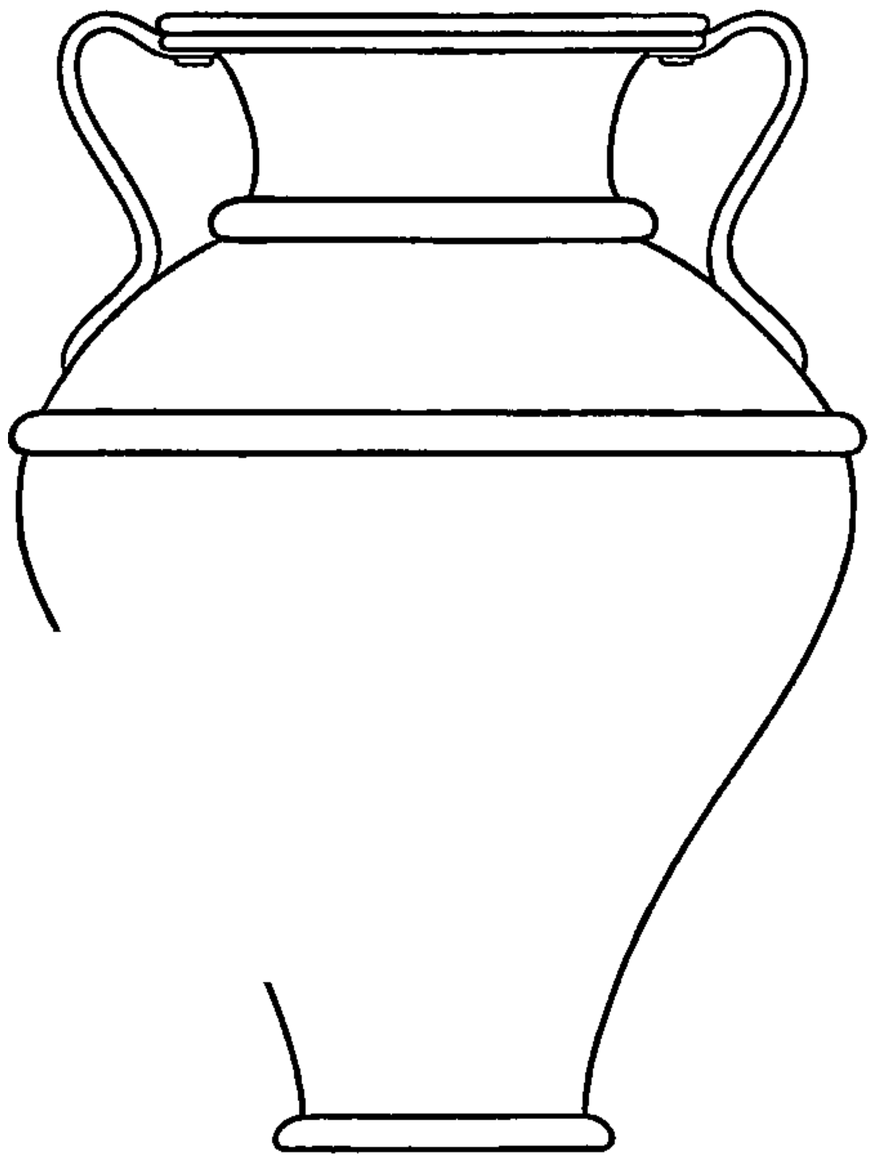


FIG. 245. OUTLINE OF BRONZE VESSEL, 'HYDRIA' OR 'KRATER', KURION, CYPRUS (L. M. I *b*).

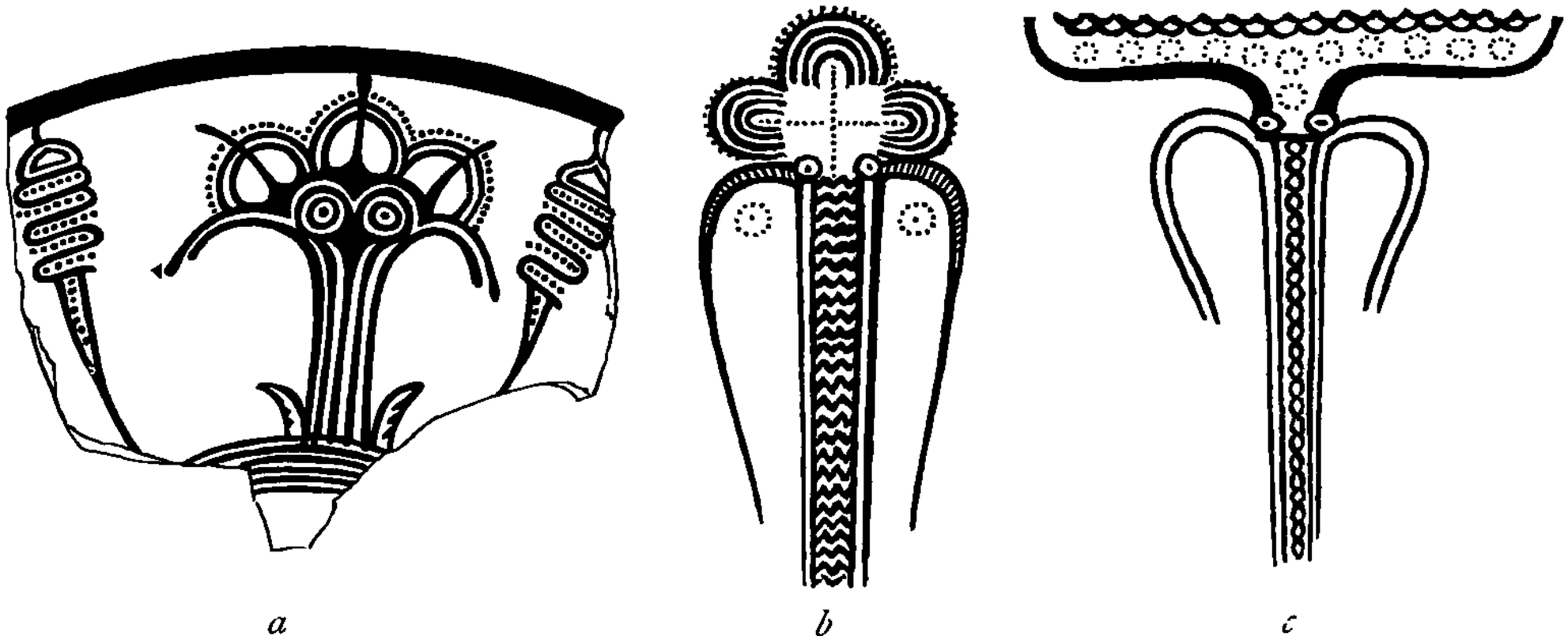
FIG. 246. 'KRATER' (L. M. III *a*) FROM TEMPLE-TOMB, KNOSSOS.

On the fields supplied by these new fabrics the octopus arms, now reduced to symmetrical sinuosities, are almost indefinitely prolonged. Good examples of this decorative evolution of 'kraters' of the L. M. III stage, connected it would appear with the later memorial cult of one of the last Priest-kings, came to light at Knossos itself during the recent excavation of the 'Temple-Tomb'.[1] One of these, illustrated for the sake of comparison in Fig. 246, has the further interest of preserving round its neck—a normal position[2]—the adder marking, here become mere vandyking, without the dots. It shows the arms again reduced to three on either side, one couple following the body of the cephalopod in evenly balanced coils, the others rolling on in two bands each with three similar undulations.

[1] See below, § 117.

[2] For a contemporary specimen, in the same stage of degeneration accompanying a similar octopus type, see the amphora, *Palaikastr Excavations*, 1902–6, *B.S.A.* Suppl. Paper, No. 1, p. 83, Fig. 66*b*. A 'krater' with an octopus of still more formalized kind is seen in the Milatos Tomb Group, *Preh. Tombs of Knossos*, p. 96, Fig. 105 (*Archaeologia*, lix), which must be referred to L. M. III*b*.

Whole sides of the clay *larnakes* are covered with these symmetrical 'hair-pin' curves. In the Mainland regions, the octopus speedily became four-armed, and these curving tentacles—finally reduced to a pair or even a single



a *b* *c*

FIG. 247 *a–c*. 'MYCENAEAN' OCTOPUS PATTERNS: *a*, MYCENAE: *b*, *c*, ZYGOURIES (KLEONAE).

Four-armed types.

arm on either side—attach themselves to a kind of pillar which, as we shall see elsewhere, ultimately connects itself with the central cult of Knossos. Sometimes, under the vitalizing impulse now visible, these unpromising combinations are woven into patterns of some ornamental merit (see Fig. 247). A reflection of this widely diffused 'Mycenean' type is seen on the 'stirrup-vase' from the 'Re-occupation' deposit in the 'Royal Tomb' at Isopata, Fig. 231, *c*, above.

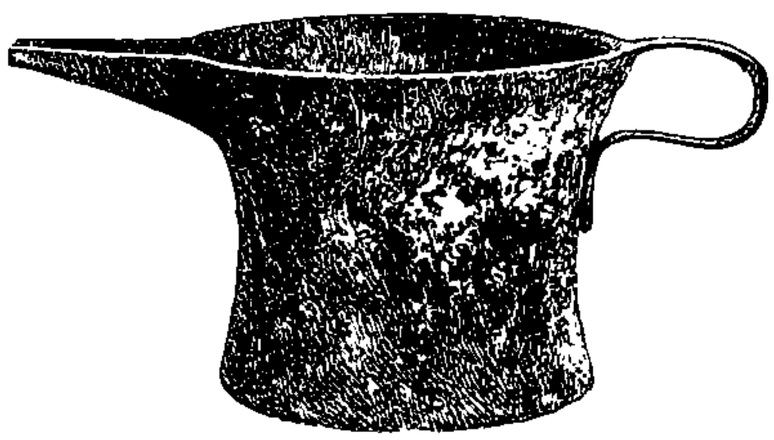


FIG. 248. SPOUTED TANKARD: BRONZE.

On a spouted one-handled goblet from Diktaean Cave that reflects a type of bronze utensil in vogue both in Crete and on the Mainland side in the latter part of L. M. III (Fig. 248)[1] the octopus takes a decorative form that incorporates the 'half ivy-leaf' motive (Fig. 249, *a*). What is specially interesting to observe is that to whatever fresh impulse the decorative luxuriance here apparent was due, the details of the composition are based on elements supplied by the 'Palace Style' of Knossos. On the other side of the vessel is a chequer-work panel derived from the architectonic group of designs on palatial 'amphoras' like that reproduced below in Fig. 290.[2] The scrolls between the two uppermost arms of the octopus itself are deriva-

[1] In Candia Museum from a L. M. III *b* tomb, Gournes, J. Hatzidakis, Ἀρχ. Δελτ., 1918, p. 73, Fig. 17, 1. Another occurred with the 'Tiryns Treasure'.

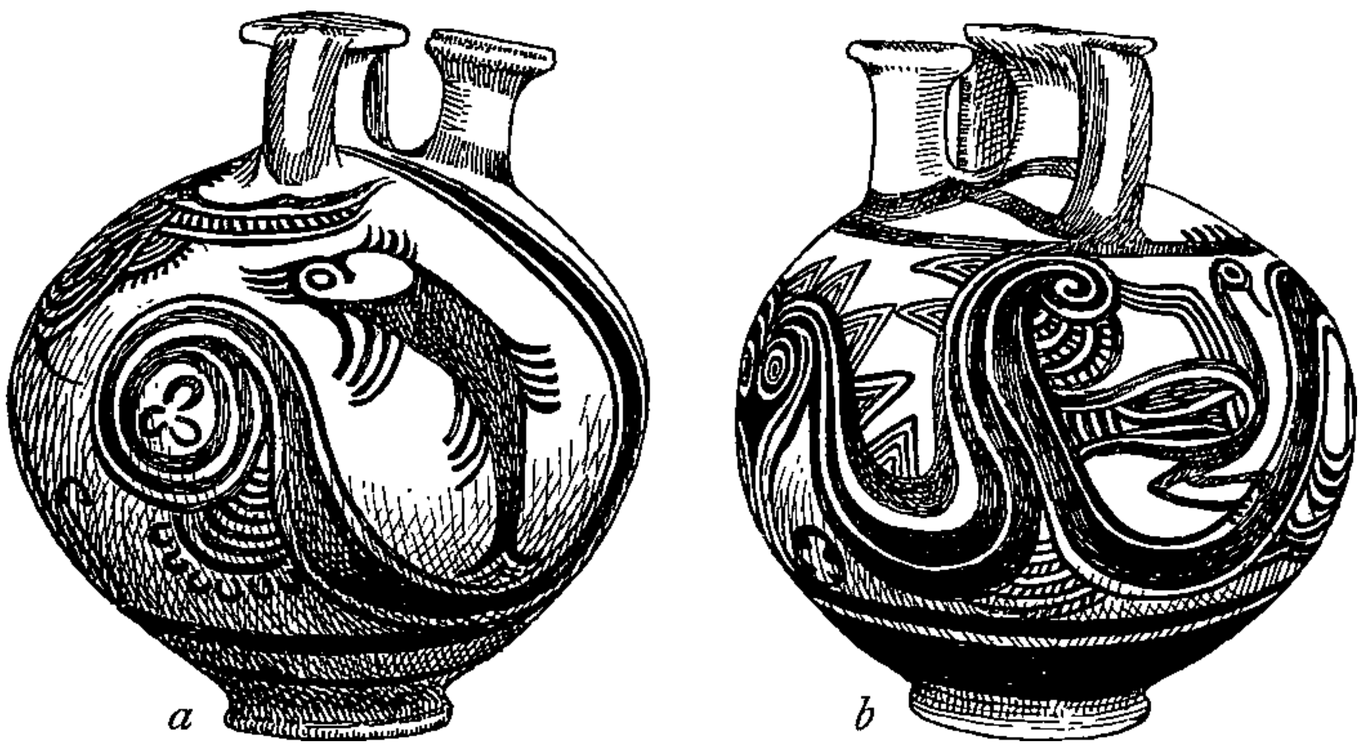
[2] P. 347.

tives of the rock-work of the 'marine' tradition, and in this connexion there can be little doubt that 'the two facing curves at the side represent—reduced to two—the 'three C's', so characteristic of the L. M. II palatial

a *b*

FIG. 249 *a*, *b*. SPOUTED TANKARD FROM DIKTAEAN CAVE (L. M. III *a*).

series and which themselves, as we shall see, had originated from the trifoliate arrangement of rock-work and sea-tang on the finest L. M. I *b* vases.



a *b*

FIG. 249 *bis*. STIRRUP VASE FROM IALYSOS, RHODES (MAIURI, *IALISOS*, p. 37, Fig. 39).

An interesting pendant to the Diktaean tankard is supplied by a stirrup vase from Ialysos, Fig. 249 *bis*, *a*, *b*, showing a L. M. III *b* duck and dolphin combined with the octopus on which the Knossian 'three C's' survive complete.

The influence of the architectural 'Palace Style' motives is again seen in the pillar-like stems with which the head and tentacles of the octopus type are combined on a group of stemmed goblets abundantly forthcoming at Mycenae and other Mainland sites.[1]

Final degenerations.

At other times the tentacles are only traceable in a pair of wisps or flourishes issuing from each side of the handle. In the latest Minoan

[1] For Fig 247 *a*, see *B.S.A.*, XXV, p. 107. *b*, *c* are from the table of specimens on goblets given by Blegen, *Zygouries*, p. 146, Fig. 137.

epoch, when the Mainland style reacted on Crete, we see a parallel scheme on the hut-urn from the 'Spring Chamber' at Knossos.[1]

To such depths of abasement has this once beautiful series of marine designs descended that nothing more remains than three upright lines with as many sinuous wisps attached to the outermost of them.

FIG. 250. EVOLUTION OF 'TRIPLE C' ORNAMENT OF L. M. II AND III FROM TRIPLE GROUP OF ROCK AND SEAWEED OF 'MARINE' STYLE (L. M. I *b*).

The 'Triple C' Ornament and its Origin in a Motive of the L.M. I *b* 'Marine' Style.

The 'Triple C' ornament on 'Palace Style' vases.

A characteristic feature in the field of 'Palace Style' vases referred to above is a trefoil ornament in the shape of three symmetrically grouped C's, sometimes accompanied by dots. This ornament is, in fact, the formalized derivative of a recurring motive of the L. M. I *b* 'marine' style consisting of a triple group of rock and seaweed, the stems of which become three linked arches—the arches themselves corresponding with those which appear over the three tentacles of the argonauts in what has been called above the 'Knossian unit' of this style.

Derived from group of rock and seaweed.

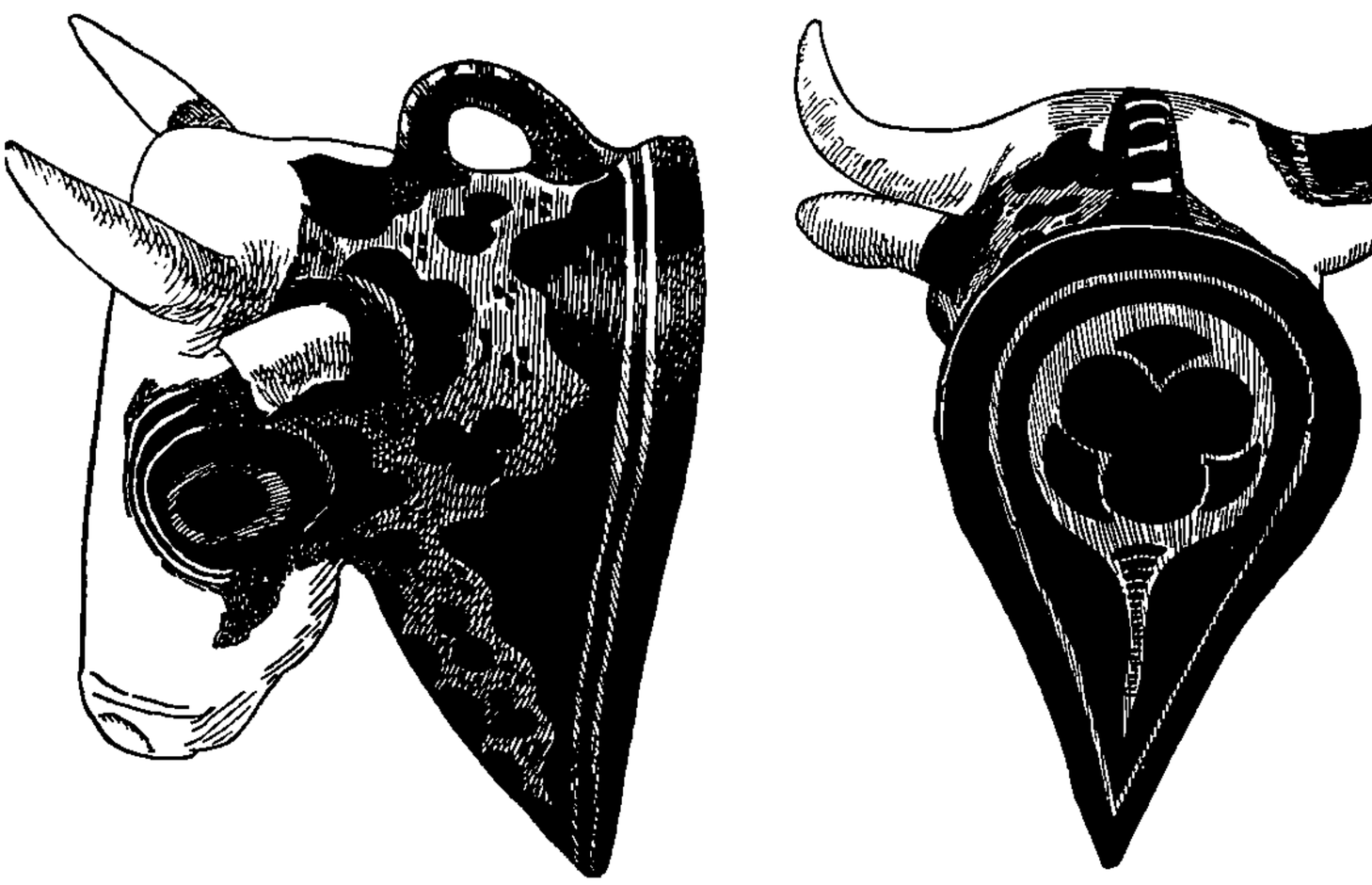
The process of derivation is clearly shown in the Comparative Table, Fig. 250. Here the upper row (*a*, *b*, *c*)[2] reproduces typical forms on vases

[1] See p. 352 below, Fig. 296 and cf. *P. of M.*, ii, Pt. I, p. 129, Fig. 64.

[2] See above, p. 277, Fig. 210 and p. 278, Fig. 213.

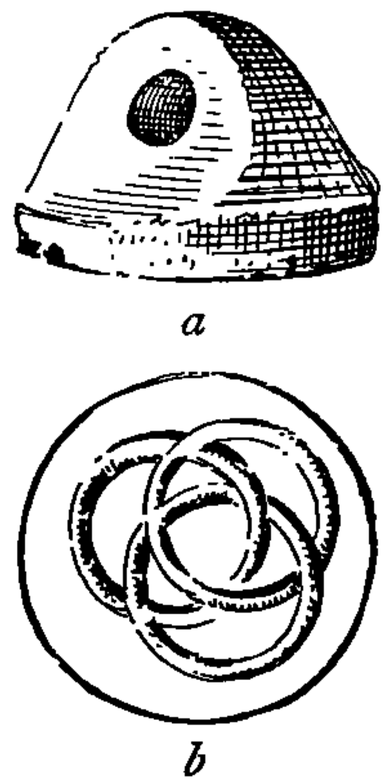
of the L. M. I *b* 'marine' group while the second series (*d*–*g*)[1] are taken from examples of the 'Palace Style' class (L. M. II) beginning with the transitional type *d*.[2] The lower row (*h*–*k*) consists of L. M. III types.

Fig. 250 *d*, which occurs as an intrusive element in the field of an 'amphora' with an early design of the 'papyrus' group,[3] has a special value as retaining something of the grotesque outlines of the prototype, and



a *b*

FIG. 251, *a*, *b*. BULL'S HEAD 'RHYTON' FROM LITTLE PALACE.



a *b*

FIG. 252, *a*, *b*. CRYSTAL BEAD-SEAL, ARKHANES, WITH INTERSECTING CIRCLES. ($\frac{2}{1}$)

in this way supplying a connecting link between the two series. The dots of the late L. M. I *b* type, Fig. 250, *c* reappear in *e*. Finally, as in the L. M. III tankard (Fig. 249, *a*) described above, only two of the C's survive (Fig. 250, *k*).

Stone inlays of trefoil and quatrefoil outline are already found on the libation vessels of a very ancient Sumerian class[4] in the form of bull's heads or of the whole animal to represent their patches, and the pattern is reflected on a long series of Minoan 'rhytons'. On a crystal bead-seal, it is outlined by intersecting circles (Fig. 252, *b*).[5] The reappearance of the Knossian 'three C's' motive in Rhodes and Cyprus is a highly suggestive

[1] *a*, Tylissos 'amphora'; *b*, 'Marseilles Ewer'; *c*, spouted bowl, Knossos; see p. 279, Fig. 214 above.

[2] *d*, 'Amphora', p. 321, Fig. 262 below (grouped with papyrus sprays); *e*, stirrup-vase from Tomb, Zafer Papoura; *f*, 'amphora' with stippling, Fig. 243, Isopata Tomb; *g*, 'amphora' from N.W. Sanctuary Hall; *h*, stirrup-vase. All these are from Knossos. *i*, Ialysos, Rhodes (Fig. 249, *bis*); *j*, 'Krater', Enkomi, Cyprus (*B. M. Excavs.*, p. 48, Fig. 74, Tomb 83); *k*, tankard, Diktaean Cave (Fig. 249, *a*).

[3] See p. 321, Fig. 262, *a*, *b* below.

[4] *Ibid.*, Pt. II, p. 538, Fig. 342, *a*1, *a*2, here reproduced.

[5] See too above, p. 93, Fig. 60, *b*.

phenomenon. A 'Kylix' from a L. M. III tomb at Mycenae reproduces the 'two Cs'.[1]

Marine Motives of 'Palace Style': Whorl-shells: probably Tritons.

Whorl-shells.

The earliest of the 'Palace Style' amphoras depicting octopods, that namely reproduced in Fig. 240, presents, on the left shoulder by the handle as there seen, a whorl-shell of fairly naturalistic aspect, which in its general appearance belongs to the same artistic phase as those associated with the 'marine' style of L. M. I *b*. This in itself is an interesting equation, since it affords an indication, confirmed by other evidence, that the earliest phase of the 'Palace Style' vessels really overlapped the mature stage of L. M. I *b*.

FIG. 253. FRAGMENT OF 'AMPHORA' SHOWING WHORL-SHELL—PROBABLY TRITON. WEST PALACE BORDER, KNOSSOS.

Triton as well as *Murex*.

The prickly projections round the lowest whorl in this case at once suggest a *murex*, which undoubtedly played a part in the creation of some of the shells represented. In certain forms, however—such as Fig. 253—without the prickles, it is impossible to doubt that the conch or *triton* shell, used for the summoning of the divinity on the occasion of sacrifice, was there intended. In Fig. 257 below we recognize it in actual association with the Double Axe.

The intermediate type illustrated by the Knossian amphora fragment (Fig. 253) itself supplies a link with others of a purely decorative class.

In Fig. 254, *a*, *b*, consisting of a section of the shoulders and upright collar of a L. M. II jug and the side of a bowl, the mouth of one whorl-shell is linked on to the apex of another.

Later evolution of whorl-shells.

In-fluenced by 'tendril' ornament of early jewellery.

In the linked arrangement of the whorl-shell motive, as seen in Fig. 254, *a* and the parallel example from a bowl, Fig. 254, *b*, we must certainly recognize an assimilation to a decorative scheme of very ancient origin in Crete. It substantially reproduces the combination of the S-scrolls with a 'tendril' ornament that already appears on seals of the Second Early Minoan Period, and subsequently plays an important part both in ceramic designs of the finest polychrome style and in the gold embossed plates of Minoan goldsmiths, such as were found in the Mycenae Shaft Graves.[2]

[1] See Pt. II, p. 748.

[2] *P. of M.*, ii, Pt. I, pp. 195, 196, and Fig. 105.

The Early Minoan seal-types, Fig. 255 *a*, *b*, *c*, *d*, and the embossed plate, Fig. 256, from the Fifth Shaft Grave, sufficiently illustrate the tradi-

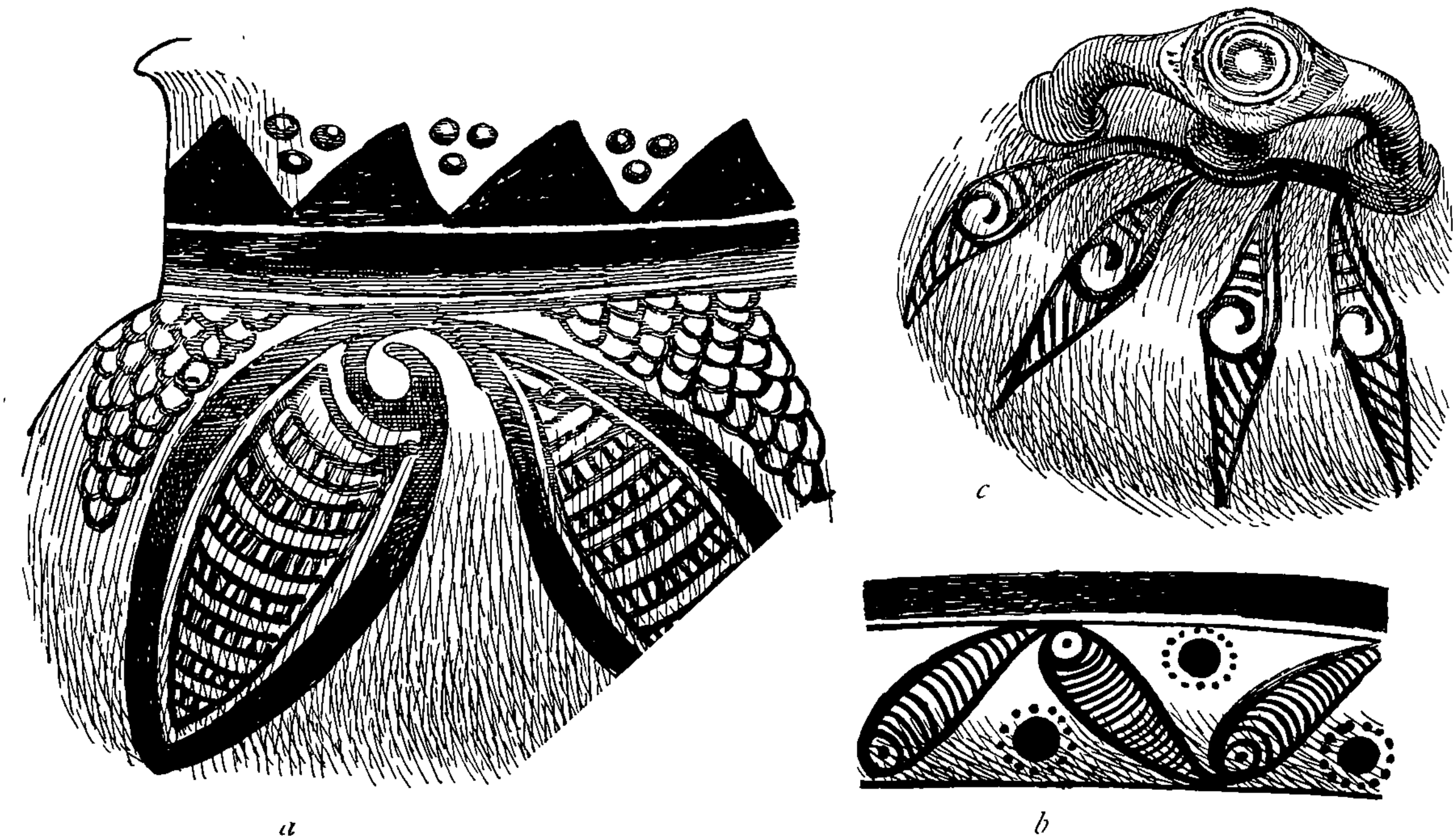


FIG. 254. LINKED WHORL-SHELLS IN LATER STAGES OF EVOLUTION: KNOSSOS.

tion that influenced the decorative grouping of these conventional whorl-shell types. In Fig. 254, *a*, *b*, we see the mouth and apex of the shell alternately

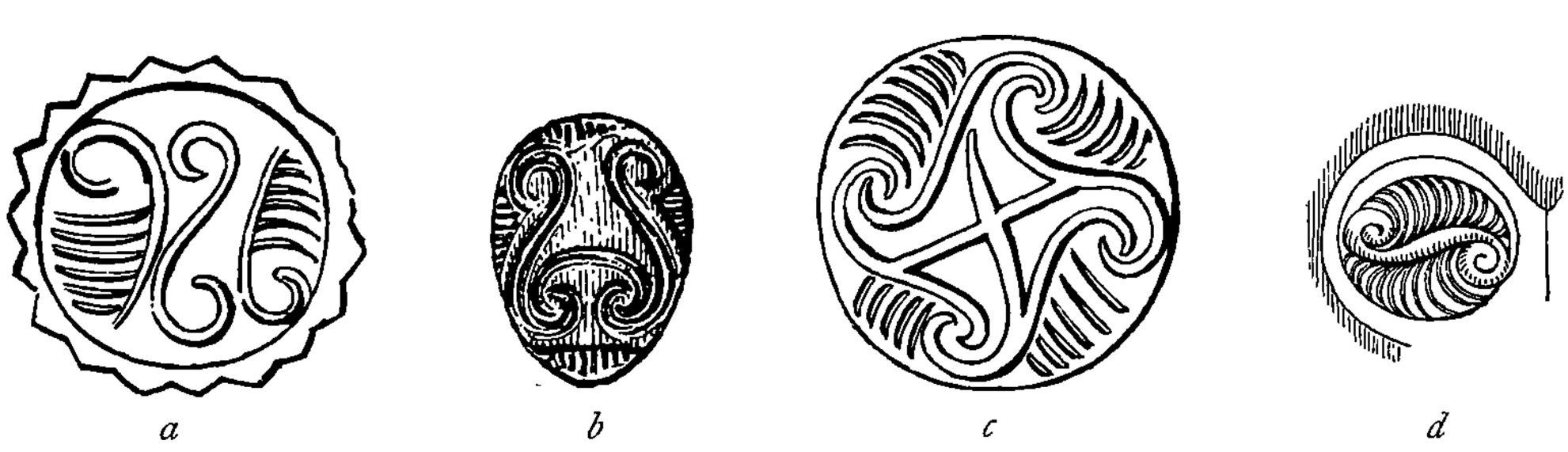


FIG. 255. *a–c*, S-SCROLL AND TENDRIL PATTERN ON MINOAN SEALS; *d*, ON GOLD PLATE, MYCENAE.

linked. In other cases, as on the slightly later stirrup-vase (L. M. II *a*), Fig. 254, *c*, the two conventional whorls start from the same mouth.

The above specimens, all from the site of Knossos, illustrating

Tritons with ritual objects on Palatial 'amphora'.

successive decorative out-growths of the whorl-shell type on pottery of the local fabric, find an interesting supplement among the fragments of a late 'Palace Style' amphora[1] exhibiting various objects of a religious nature, but the original arrangement of which it has been impossible to restore. While the other details are given below in their special context,[2] it is convenient here to reproduce in Fig. 257 the highly ornamentalized version of what we may suppose in this case stood for a conch-shell type. Its close relationship to the cult is here attested by the ends of the duplicated Double-Axe blade that here appear beside it.

FIG. 256. EMBOSSED PLATE FROM FIFTH SHAFT GRAVE, MYCENAE.

This evolution of the whorl-shell motive has a special interest from the immediate relation in which it stands to a widespread class of 'Mycenaean' ceramic types of this class belonging to the succeeding epoch. The manner in which these are often linked together also implies a parallelism with the Knossian examples shown in Fig. 254. It is possible that the Mainland type may have itself reacted on the later Minoan ceramic types, such as we see them, for instance, on a 'krater' from Milatos. But it looks as if these 'corkscrew' designs had themselves received their first suggestion from the Cretan side.

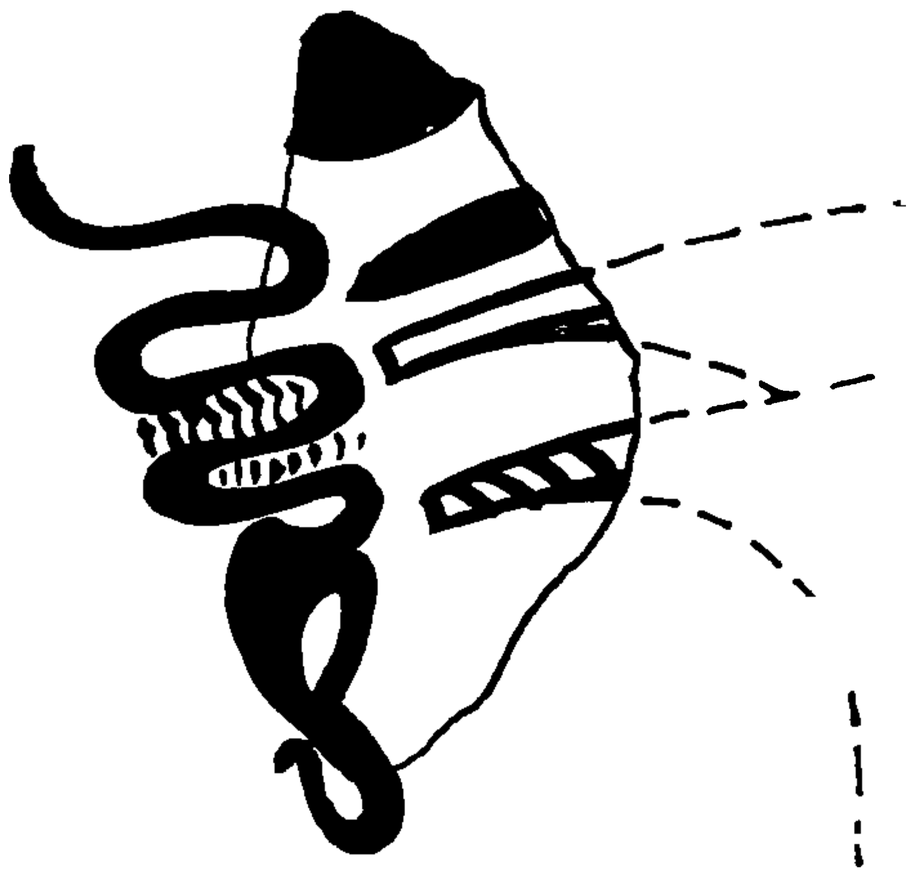


FIG. 257. FRAGMENT OF 'AMPHORA' WITH ORNAMENTALIZED CONCH-SHELL BESIDE POINTS OF DOUBLE-AXE BLADE.

'Sacral Ivy' and 'Ogival Canopy' on 'Palace Style' Vases.

The 'Sacral Ivy' and the closely allied decorative unit here termed the 'Ogival Canopy', which occupy so prominent a place in the L. M. I *b* repertory, are in it not infrequently associated with marine objects such as coralline sprays and 'brittle stars'. Both motives survive on vases of the

[1] Found by the original South-West Corner of the Palace.

[2] See below, p. 346, and Fig. 289 *d*, *e*.

L. M. II 'Palace Style', though the 'ivy-leaf' is now of less common occurrence, except in the shape of small decorative appendages to the margin of papyrus tufts.[1]

Survival of 'Sacral Ivy' and

FIG. 258. FRAGMENT OF 'AMPHORA', FIG. 243.

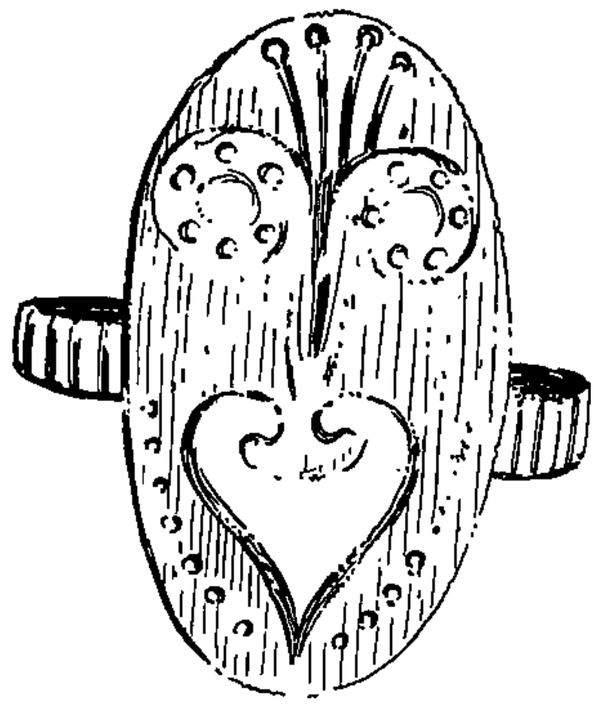


FIG. 259. BRONZE SIGNET-RING FROM NEAR KNOSSOS.

'Ogival Canopy' on Palace Style vases.

Both motives, however, occur in simple forms on the fragment, Fig. 258, of an 'amphora', the principal subject of which, as seen in Fig. 243 above, is a symmetrically displayed octopus. Here the 'canopy' covers a lily flower of many stamens, while an 'ivy-leaf' with cross-hatching is seen above.[2] A bronze signet-ring of an exceptional class, Fig. 259, from the neighbourhood of Knossos,[3] probably belonging to this epoch, shows a conventional lily with four stamens in conjunction with the canopied '*waz*' symbol.

A good specimen of a 'Palace Style' 'amphora' from the North-West border contains in its principal band a series of designs in which this sacred papyrus wand is combined with the 'ogival canopy', within the terminal coils of which are reserved rosettes (Fig. 260). The figures above, resembling half Double-Axe blades[4]—in the upper row with intervening papyrus tufts—are specially noteworthy when it is borne in mind that single axes with recurved ends were now coming into use under Cypriot and Syrian influences.[5] In Fig. 292 (p. 349) below, the idea of the axe embedded in the sacred pillar is still traceable.

A somewhat fuller decorative development of a similar '*waz*' canopy

[1] E. g. p. 324, Fig. 264, G.

[2] The upper border of this is restored in Fig. 258.

[3] In my Collection.

[4] See, too, p. 320, Fig. 261. For the band of single-bladed axes with intervening papyrus sprays on the shoulder compare Fig. 282, p. 340, with a spiral and rosette band.

[5] See below, p. 414 seqq.

recurs on the three faces of an 'amphora' from the 'Tomb of the Double Axes' at Knossos (Fig. 261).[1] The intervening spaces here are filled by a conventional representation of rock-work, taken from the 'marine' ceramic cycle.

In a form suggestive of its origin in ornamental metal-work, the ogival canopy is also repeated in a series of

FIG. 260. 'AMPHORA' FROM NORTH-WEST PALACE BORDER WITH 'OGIVAL CANOPY', ETC.

FIG. 261. 'AMPHORA' FROM TOMB OF DOUBLE AXES.

linked spirals on the amphora illustrated above in Fig. 238.[2] A curious survival of this metallurgic aspect is found, moreover, on the rim of the very late specimen of this class of vessel illustrated below in Fig. 279[3].

A similar ogival design displaying double rosettes—here with four petals recurs on the fine 'amphora' (Fig. 262, *a*)[4]—of Knossian fabric and

[1] See A. E., *Tomb of the Double Axes, &c.*, p. 47 and p. 49, Fig. 65.

[2] See pp. 302, 303.

[3] p. 336.

[4] This 'amphora' was illustrated in connexion with the 'Palace Style' of Knossos by Dr. D. Mackenzie (*J. H. S.*, xxiii, 1903, p. 192, Fig. 10). See, too, Part II, § 116.

a

b

FIG. 262. *a*, 'AMPHORA' OF KNOSSIAN FABRIC AND INCIPIENT 'PALACE STYLE', FROM MYCENAE. *b*, SECTION OF SHOULDER PATTERNS.

material and in the incipient 'Palace Style'—from the same Chamber tomb at Mycenae as Fig. 216 above. As already noted, it preserves a record of the original marine element in the 'triple C' ornament. It also exhibits round its shoulders (see Fig. 262, *b*) a fair representation of the beaded festoons and crocus pendants of the L. M. I *b* class, thus preserving a reminiscence both of the 'toilette' scenes of the M. M. III fresco painters.

Marine tradition of '3 C's,' on 'Amphora'.

Yet the practical identity of the canopied *waz* motives—here seen along side of those of the 'amphoras' (Figs. 260, 261)—is clear. The

evidence sufficiently shows that all alike must be classed with the fabrics of the true 'Palace Style'.

The curiously slender stalks here visible and the ample field bring this representation into connexion with a small group of 'amphoras', of which other examples are described below.[1] The reserve visible in the design of Fig. 262, *a*, differentiates it from the L. M. I *b* vessels, where the canopied *waz* is in almost all cases part of a continuously woven decorative composition. The same conclusion is borne out by the conventionalized papyrus clumps with which these ornamental sprays are associated. This 'amphora' was, in fact, found in company with other remains of similar vessels on the borders of the 'North-West Sanctuary Hall'.

Overlapping of L.M. I *b* with 'Palace Style': Chronological significance.

Over-lapping of L.M. I*b* with 'Palace Style': L. M. I *c*.

The overlapping of characteristic designs of the L. M. II palatial class with elements, like the *murex* and crocus pendants, attesting the still living influence of the L. M. I *b* style, has an interesting chronological bearing. It must be inferred in the first place that the 'Palace Style' of Knossos had already taken shape when the L. M. I *b* ceramic phase was in its prime. Since the latter seems already to have taken shape by about 1500 B.C., we may well carry back the root elements from which at a slightly later date the 'Palace style' of L. M. II was developed to the early part of the Fifteenth Century B.C. This confirms the conclusion already indicated by the reflection of the metal technique of the L. M. I *a* Period and the transitional M. M. III *b* phase on a series of painted vessels belonging to the 'Palace Style'. This interconnected class may be defined as L. M. II *a*.

It is evident that in its lower direction the L. M. I *b* ceramic class had continued to be produced in a wide Mainland and Aegean area throughout the period covered by the later products of the palatial style—L. M. II *b*—in Knossos itself and the area immediately dominated by it. Outside Crete the L. M. I *b* fabrics were by that date beginning to assume the more degenerate aspect to which the term 'L. M. I *c*' is here applied.

Composite Plant Motives of 'Palace Style' and their Sources.

Anticipation of 'Palace Style' in Iris sprays of

The most magnificent creations of this palatial ceramic style were unquestionably the highly stylized plant groups, largely based on the conventional papyrus.

Already in the preceding Age, however, some anticipation of the artistic

[1] Notably Fig. 271, p. 328, below, and Fig. 244, p. 309.

fantasy that these display may be seen in the relief fresco of the Southern Entrance passage, where the Priest-king with his plumed crown and lily collar walks in an Elysian field leading, it would seem, a sacred Griffin.[1] Here the ornamentalized flowers, like glorified Irises, amidst which he moves, have much in common with the sprays that decorate the finest 'amphoras' of the 'Palace Style'.

'Priest-king Fresco'.

But it is the exotic papyrus, with its long sacral association in the Nile Valley, that now becomes the principal underlying plant motive in the decoration of the 'Palace Style' vases. The starting-point of this ornamentalized version is itself to be found, as already noted, in the painted stucco panels of the 'House of the Frescoes', in which, appropriately enough, Blue Monkeys are seen peering between the stalks. The papyrus sprays, thus transplanted into Cretan soil, are depicted under a floral aspect of a brilliant blue with a dotted white and orange margin (see Comparative Table,[2] Fig. 264, *a*, *b*), and beside them, the Minoan artist has introduced clumps of native reeds, with a circular flower on either side of the central shoot, but otherwise rounded off in the same papyriform tufts (Fig. 264, *c*).

Composite plant motives: papyrus types.

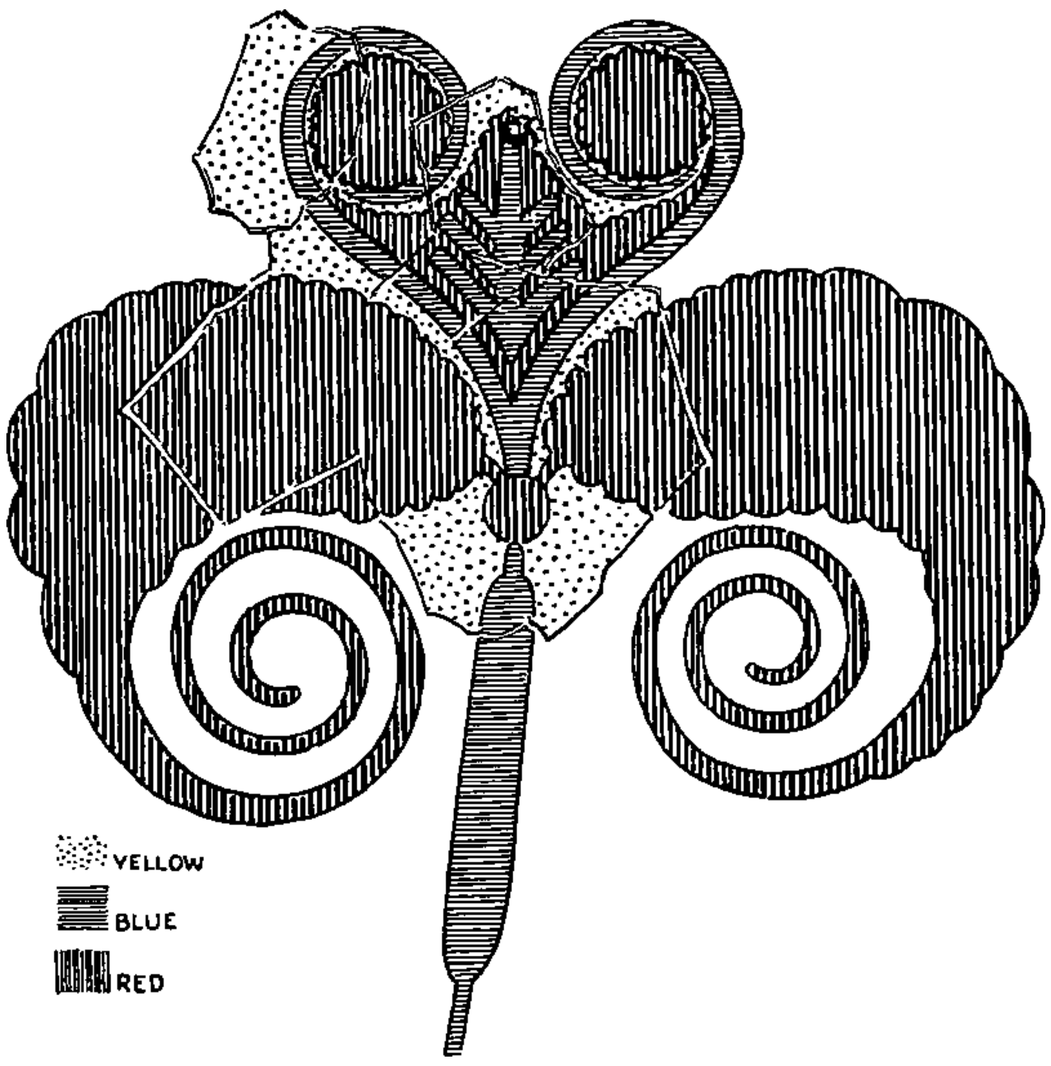


FIG. 263. STYLIZED IRIS FLOWER: 'PRIEST-KING' RELIEF.

The dotted upper margin of all these types—as finally reduced to a halo of dashes—has a long later history. It is itself due to the reaction of similar motives in goldsmiths' work. There it is a special characteristic of the type of ornament where the papyrus symbol is combined with the lily. Such dots occur, still in an original metallic connexion, above the projecting ornaments of this class on the lily crown of the 'Priest-king' relief and on the bead pendants attached to the network worn by the 'Cupbearer' and his fellows of the 'Procession Fresco', examples of which are here repeated in Fig. 265.[3]

[1] *P. of M.*, ii, Pt. II, p. 774 seqq. and Frontispiece (Pl. XIV).

[2] Reproduced from *P. of M.*, ii, Pt. II, p. 477, Fig. 285.

[3] See *P. of M.*, ii, Pt. II, p. 726, Fig. 453.

It will be seen that in the ceramic examples of this class of ornament belonging to the 'Palace Style', the tradition of the two circular flowers of the fresco prototype, Fig. 264, c, is revived, but they are enclosed in the coils that rise on either side of the stem (Fig. 264, G, H). In the case of the 'amphoras', Figs. 260, 262, above, the coils in which the flowers are set form part of the 'ogival canopy' above the '*waz*'.

Influence of palm-tree types, reeds and lilies.

One other deep-lying source of many of the composite plant forms that now rise into view remains to be mentioned. The highly recurved spray of many of the types — which already appear in L. M. I *a* (see Fig. 264, D) — are not solely due to the influence of the lily. Combined as they so generally are with a central shoot, we can hardly fail to recognize in them a reminiscence of the frutescent palm-tree motive that plays so large a part in Minoan decorative evolution (see Figs. 266,

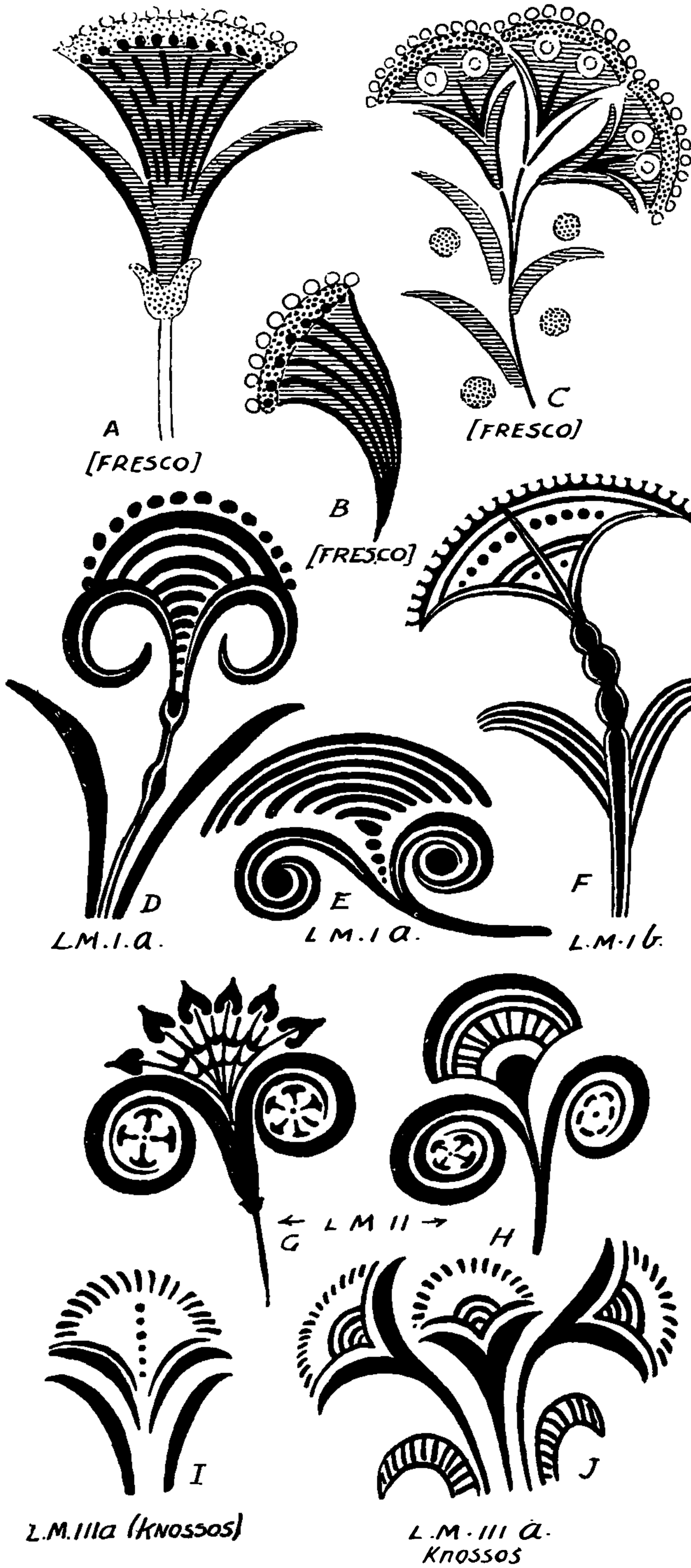


FIG. 264. PAPYRUS SPRAYS OF WALL-PAINTINGS (A–C) IN RELATION TO LATE MINOAN CERAMIC TYPES.

267).[1] Where, however, the side sprays do not coil back in this manner, there is no occasion to go beyond the native reed with its triple shoots.

Enough will at any rate have been said to give an idea of the heterogeneous character of the elements woven together in these grandiose plant designs of the great 'Palace Style' vases. The true papyrus spray and the sacral wand or *waz*, the indigenous Madonna lilies and reeds, and the frutescent palm-tree contributed in varying proportions, according to the taste of the individual vase painter, to these highly composite designs. Sometimes one model is predominant, sometimes another.

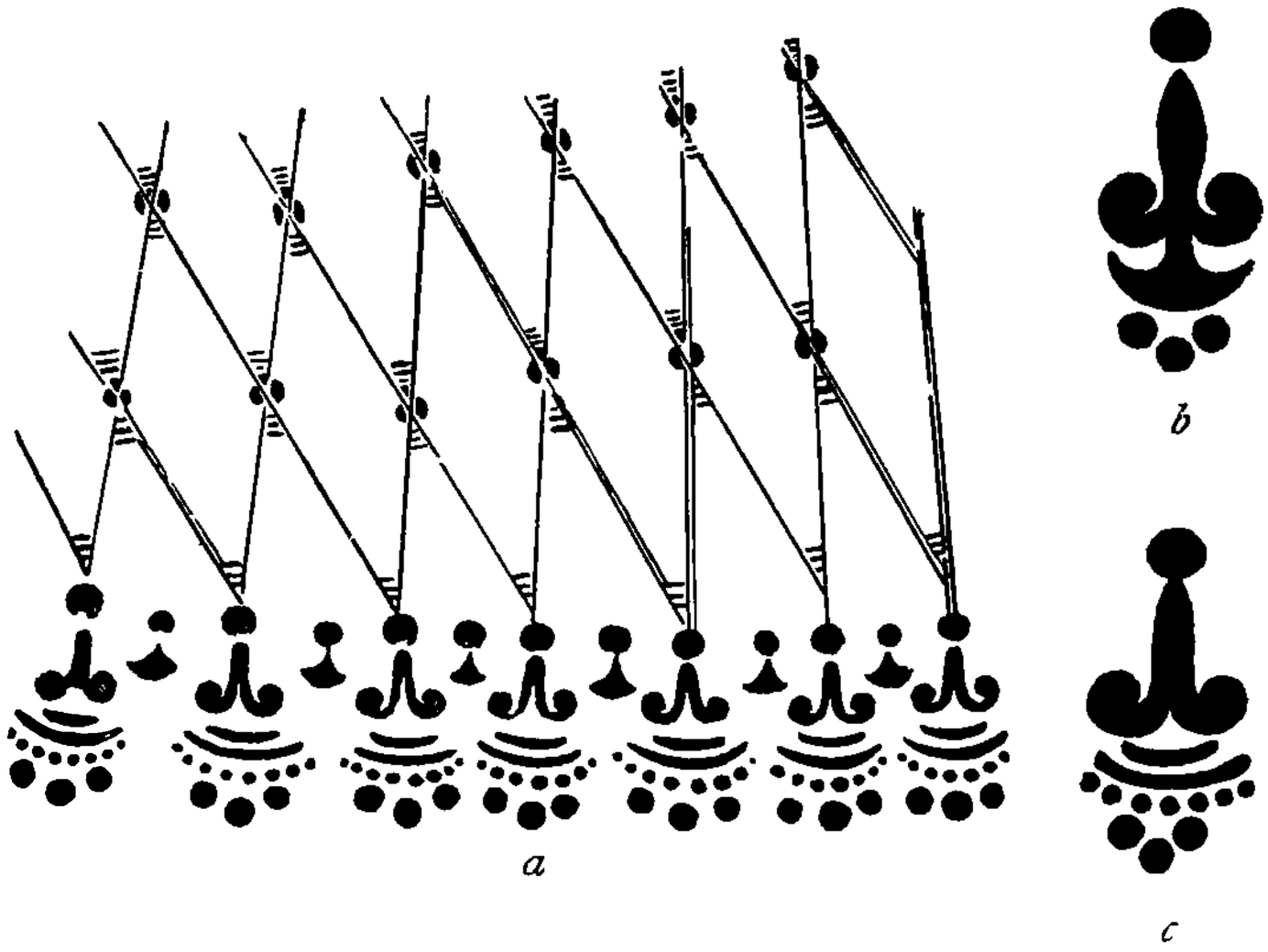


FIG. 265, *a*, *b*, *c*. BEAD PENDANTS: 'PROCESSION FRESCO'.

An example of one of these decorative plant forms has been already given in the central spray of the remarkable vessel, Fig. 262, *a*, between two others showing the canopied '*waz*'. In this case, as in others, the main outlines of the design are dependent on the three spikelets of the reed, the rest being taken from the 'beaded' papyrus type of the fresco (Fig. 264, c).

Lily motive in 'Amphora' design.

On the noble 'amphora', Fig. 268[2]—also found in relation to the 'North-West Sanctuary Hall'—the lily motive certainly underlies the floral offshoots of the stems on either side of the central plant. The filaments of the stamens are here linked by double, curving lines, and their anthers have been transformed into little cordiform leaves. Such excrescences—whether, as here, like minute buttercup leaves, or ivy-shaped as Fig. 264, G—are a constantly recurring feature in the floral compositions on these 'Palace Style' vases. The conventional rock-work on the shoulders of this 'amphora' shows some relics of the sea-tang originally attached to it.

The outer edge of the rim of this fine vase and of the succeeding example (Fig. 269) presents the sacred 'adder mark' in its earlier form with the dot as well as the wave.

[1] Reproduced from *P. of M.*, ii, Pt. II, p. 496, Fig. 301, A–D. [2] In the Candia Museum.

FIG. 266. L. M. I *b* PALM MOTIVE, THEBES, BOEOTIA (FOR COMPARISON).

FIG. 267. L. M. I *b* 'RHYTON', PSEIRA, WITH PALM-TREE MOTIVE (FOR COMPARISON).

FIG. 268. 'AMPHORA' DERIVED FROM NORTH-WEST SANCTUARY HALL OF PALACE WITH PAPYRUS AND LILY MOTIVES.

FIG. 269. 'AMPHORA' FROM LITTLE PALACE.

FIG. 270. 'AMPHORA' FROM 'ROYAL TOMB', ISOPATA

Fig. 269[1] illustrates a somewhat smaller 'amphora', from the Little Palace, with designs displaying new combinations of certain elements visible in the preceding example. It is remarkable for the reserve displayed in its arrangement, each plant standing out separately. In the somewhat kindred design seen on the vessel, Fig. 270, from the 'Royal Tomb', Isopata, the composite sprays repeat the same design and are more closely set together. Both these 'amphoras' have a shoulder zone of foliate patterns with reduplicated edges, a close imitation, as already noted, of the rims of the fine bronze-work bowls from the palatial hoard from the 'North-West Treasury Building'.[2]

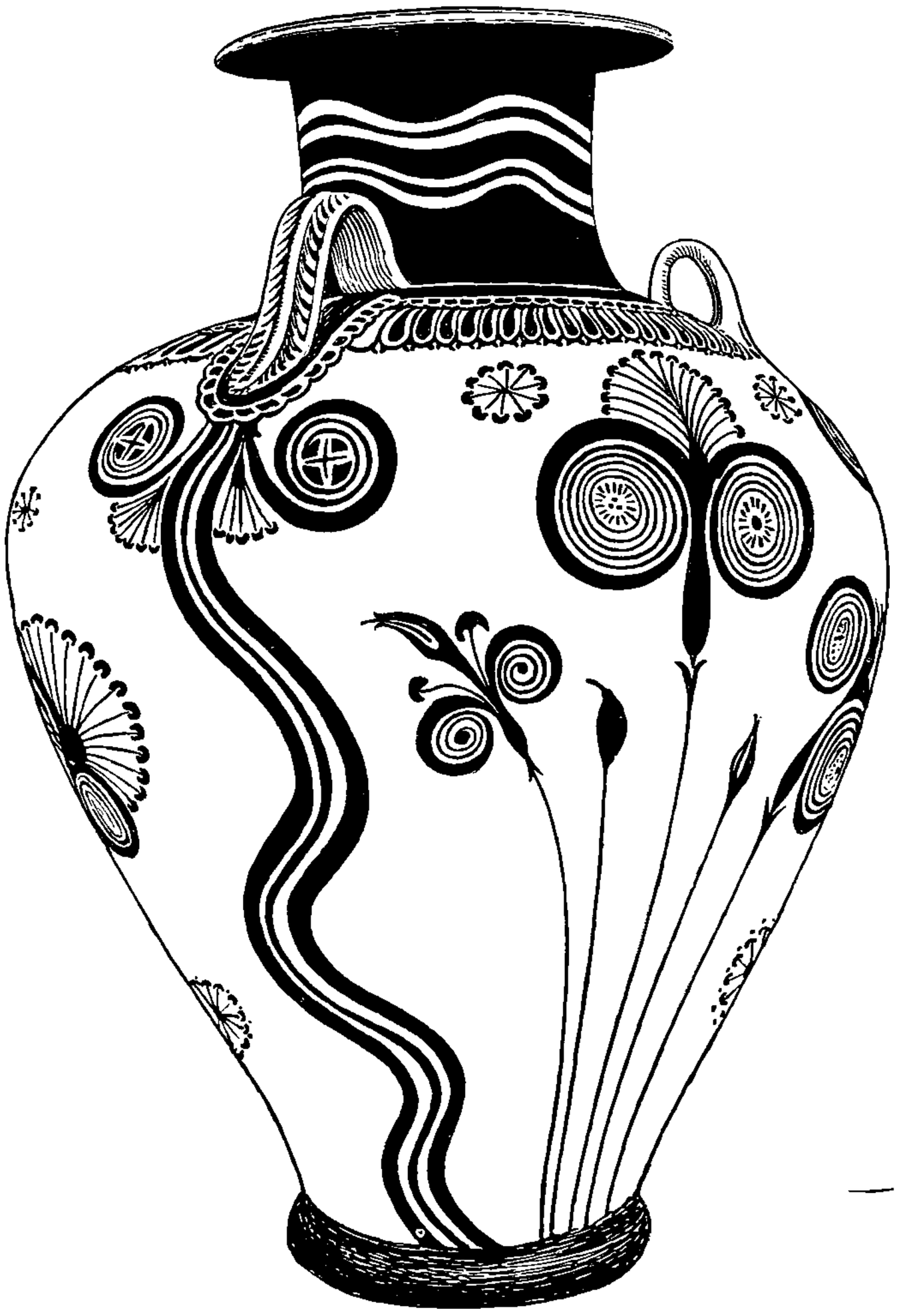


FIG. 271. 'AMPHORA' FROM NORTH-WEST PALACE BORDER WITH THREAD-LIKE STALKS AND SERPENTINE BAND.

The 'amphora', Fig. 271, also from the area North-North-West of the Palace,[3] which shows a similar metal-work pattern round its shoulders, is unique in style. The stems from which the floral motives rise are merely fine threads. The fields, moreover, are separated in a curious manner by upright waving bands suggestive of serpents descending from the handle. The reserve visible in Fig 269 is carried still further.

Of all the 'Palace Style' vases the most monumental was the splendid jar,

[1] Presented to me by the Greek Government and now in the Ashmolean Museum.

[2] See above, p. 299, Fig. 232.

[3] Found in 1929: in the Candia Museum.

Papyrus clumps on jar from Royal Villa.

Fig. 273, already described[1] as having originally stood on the second landing of the main staircase in the Royal Villa, and which indeed may be regarded as an integral part of its internal decoration. It was a metre and a fifth in height. The vegetable clumps here depicted are executed in relief, the designs of the background being as usual painted on the flat. The plants themselves are clearly intended for papyrus, its triple shoots above being cased in the overlapping pointed sheaths that in the natural plant only belong to the base of the stems. This transference is already perceptible, however, in the Egyptian models from which the group of sprays here seen was derived. The raised circle between the two sprays here seen is impressed with stellate flowers, and similar 'asterisks'[2] appear in the small central rings. It will be seen that the curved decoration of the lower zone exactly corresponds with that of the 'amphora' (Fig. 269) from the Little Palace, arguing contemporary fabric.

Egyptian convention for water.

In the original Nile-bank scenes from which these papyrus clumps were taken, the water is indicated below by means of the usual parallel zigzags, and this element is made use of in a more purely decorative manner in the undulating lines that here link together the stalks. In these, indeed, we may recognize the source of the waved connecting filaments of liliaceous flowers and other motives of the 'Palace Style' class.

In an abbreviated form the present type occurs in the ornamental design on a painted clay sarcophagus of the bath-shaped type, from a Chamber Tomb of the Zafer Papoura Cemetery.[3] This burial chest, which shows round its upper margin the waves of the 'adder-mark' motive, may be taken to represent the very latest stage of the 'Palace Style' (Fig. 272). The incurving coils with a central shoot in the middle of the design have an Egyptian religious context. They are taken over from the similar coils on either side of the papyrus wand such as we see them on amuletic scarabs of XII–XVIIIth Dynasty (Fig. 272, *b*, *c*) date, and reappear on the kilt of a man of Keftiu in the Rekhmara Tomb.[4]

Introduction of Waterfowl.

Continued taboo on human and animal designs.

It is in itself a remarkable fact that though the papyrus of contemporary Nilotic scenes thus reacted on the 'Palace Style' vases the bird and animal life with which the water plant is there associated does not fill the same place among ceramic motives.

[1] *P. of M.*, ii, Pt. II, p. 400 and p. 401, Fig. 231, and see A. E., *Knossos*, *Report*, 1903, pp. 138–40, and Fig. 188.

[2] Replaced on the reverse side of the jar Suppl. Pl. LI) by flowers with rounded petals reminiscent thus of the 'Medallion Pithoi'.

[3] Put together since the publication of the discoveries, and now in the Candia Museum.

[4] See *P. of M.*, ii, Pt. II, p. 745, Fig. 480, and cf. Fig. 481.

Representations of sea creatures such as dolphins, octopods, or whorl-shells were freely admitted to the vase-painters' repertory. But the traditional taboo that had affected their craft from the First Middle Minoan

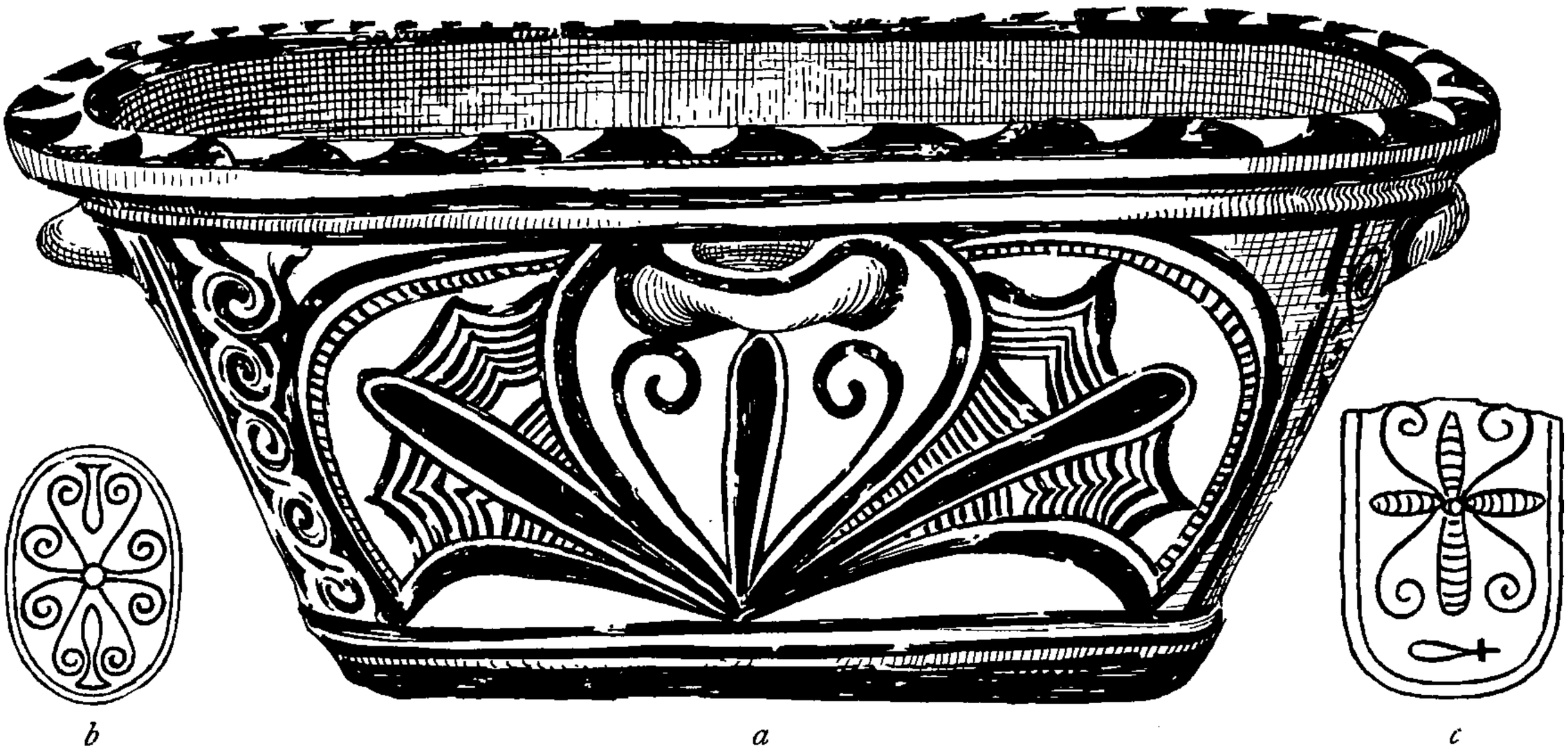


FIG. 272. *a*, PAINTED CLAY COFFIN OF BATH-SHAPED TYPE, CHAMBER TOMB, ZAFER PAPOURA. *b*, *c*, SACRAL PATTERN ON SCARABS (XIITH AND XVIIITH DYN.).

Period onwards, not only as to human forms, but regarding birds and animals, was still in force. It was in fact the omnipresent influence of this Nilotic Cycle that seems to have first broken through its strict application. The prominent place taken by the duck-hunting scenes of Egypt is best illustrated by the marvellous 'paintings in metal' on the inlaid dagger-blade.[1] Both in that case, moreover, and on a series of gem engravings we see feline animals seizing the waterfowl.[2]

Ducks now introduced from Nilotic scenes.

The vase-painters seem to have been still shy about introducing mammals, but the wild ducks already appear in certain ceramic products of the true 'Palace Style' of Knossos. Reference has already been made to two specimens of such designs on fragments of clay baths found at Phylakopi in Melos[3] and here reproduced in Figs. 274, 275, where the waterfowl are depicted among reeds and papyrus. It is important to observe, moreover, that the papyrus tuft seen in Fig. 275 is really identical in its

[1] See *P. of M.*, iii, Coloured Plate XX, opposite p. 114.

[2] A fresh example of a scene of this class on an engraved bead-seal found in the neighbourhood of Knossos is illustrated in Part II, p. 588, Fig. 582; cf. *P. of M.*, iii, p. 117, Figs. 68, 69.

[3] See *P. of M.*, iii, p. 115, Fig. 65 *a*, *b*, and *Phylakopi*, pp. 141, 142, Figs. 114, 115, where Mr. C. C. Edgar already recognized the traditional Egyptian elements in the design.

FIG. 273. 'AMPHORA' FROM STAIRCASE LANDING OF 'ROYAL VILLA' WITH PAPYRUS DECORATION IN PAINTED RELIEF.

general characteristics with the decorative type of the *larnax*, Fig. 272. Its upper edge, in the case of the Phylakopi example, shows traces of the little leaflike excrescence visible on those of a whole series of 'Palace Style' vases,

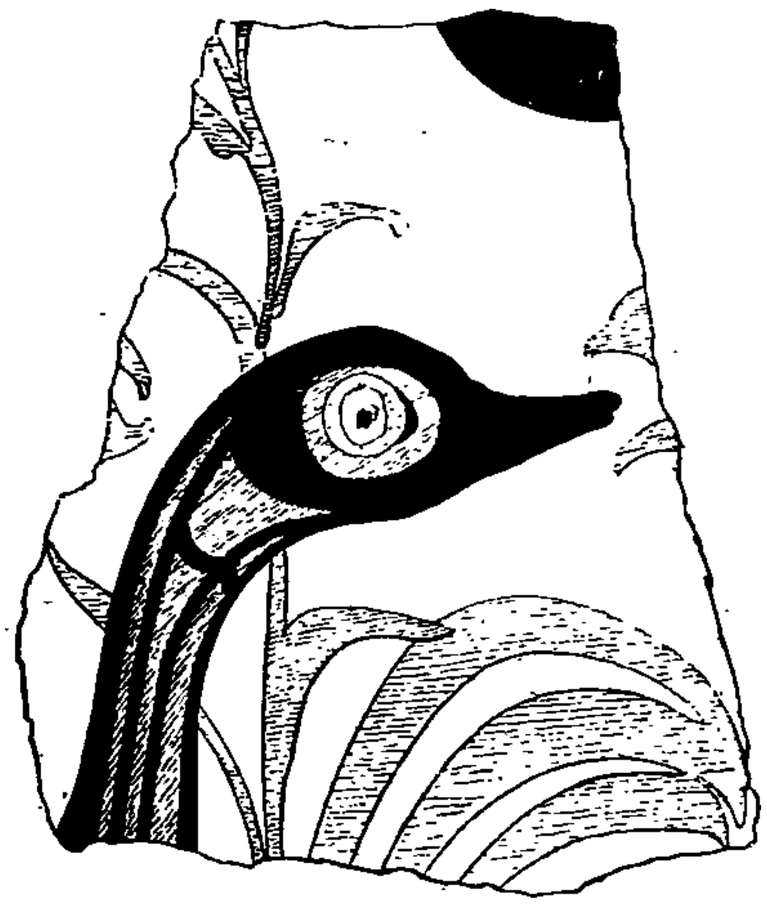


FIG. 274. PART OF BATH PAN OF KNOSSIAN 'PALACE STYLE' FROM PHYLAKOPI, SHOWING HEAD OF DUCK.

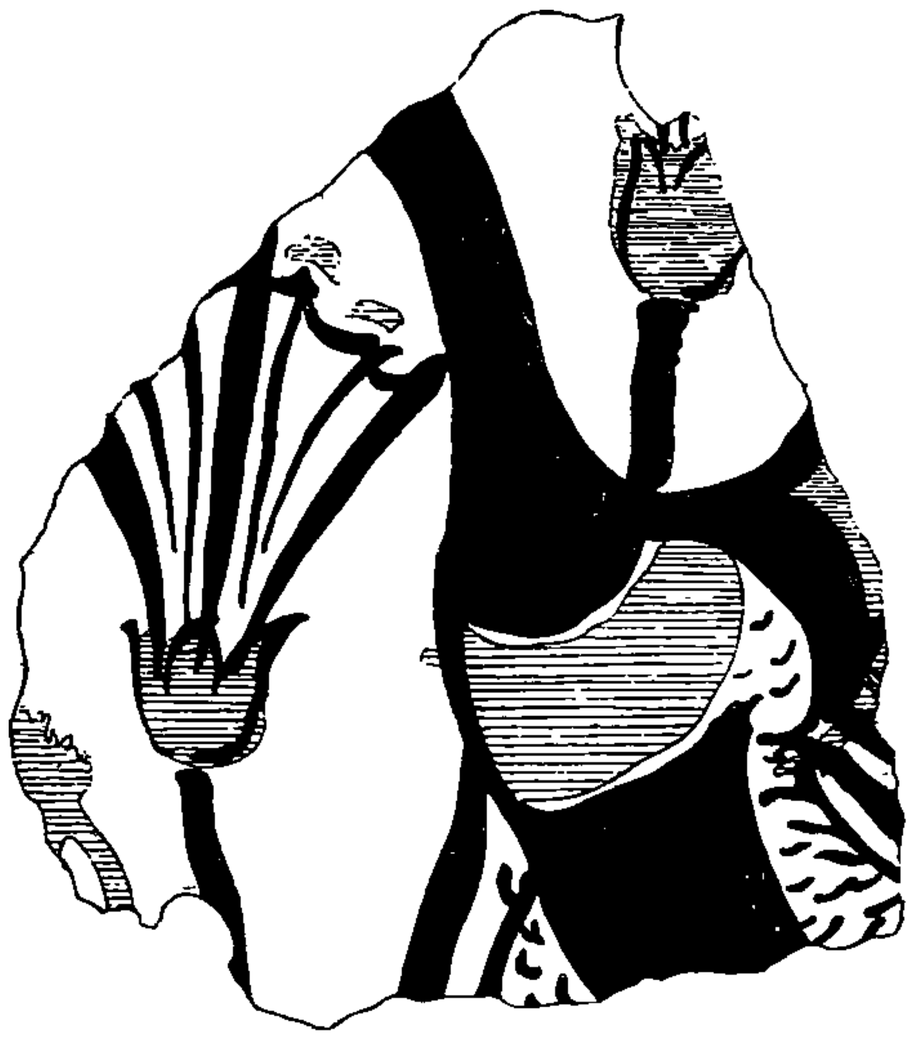


FIG. 275. PART OF BATH PAN OF KNOSSIAN 'PALACE STYLE' FOUND AT PHYLAKOPI: FLYING DUCK AND PAPYRUS-LIKE SPRAYS.

and the incurved margin itself with its triple projecting spikelets recalls the decorative sprays of the same bath-shaped coffin.

In some respects these Phylakopi fragments suggest a closer resemblance to what may be supposed to have been the fresco originals of such ceramic designs in the shape of reminiscences of these Nilotic scenes on the Palace walls. But, whether executed in Crete or Melos, they are unquestionably the work of Knossian ceramic artists of the great days of the 'Palace Style'.

'Palace Style' amphora from Argos: with wild ducks.

An 'amphora', inseparable in style from those of the palatial class, representing ducks and conventional plant forms, was found by Vollgraff in the 'Mycenaean' cemetery of Deiras at Argos (Fig. 276).[1] The main design here consists of four waterfowl, with heads alternately forward and

[1] *Fouilles d'Argos*: *Bull. de Corr. Hell.*, xxviii (1904), p. 377 seqq. and Figs. 3, 4, 5; height 61 cm. It was found in Tomb VI. Dr. Schweinfurth, who was consulted by Monsieur Vollgraff on the matter, considered that the wild duck here depicted resembled the Egyptian Nile duck, *anas Aegyptiaca* (alias *Chenalopex*): *op. cit.*, p. 381, n. 2. Types of Nile duck depicted in the Beni Hasan tomb paintings agree in fact with certain main features of those shown on the Argos vase. Thus the dark green of the neck there too breaks off at the breast and is resumed on the border of the wing as the black in Fig. 274. (Cf. *Beni Hasan*, ed. F. Ll. Griffith, Pt. IV, Pl. XII, 2.)

turned back, apparently intended for Nile ducks. The field behind is strewn with rosettes, partly involved in coiling sprays of the conventionalized papyrus class, combined with flowers, in a manner reminiscent of the Knossos 'amphora', Fig. 243, p. 308. An interesting decorative parallel is also to be seen there in the stippling, in Fig. 276, applied to the ducks' bodies, but originally a marine element representing, as the Knossian wall-paintings show, the sea sands. The papyrus tuft behind the bird in Fig. 277, *a*, is, however, of an exceptional form. The arch of dashes—itself a L. M. III characteristic—is here intersected by what looks like a small cupped flower with a knobbed stalk.[1] The tendency towards an evolution in the 'Mycenaean' direction must certainly be noted.

FIG. 276. 'AMPHORA' FROM ARGOS SHOWING WATER FOWL.

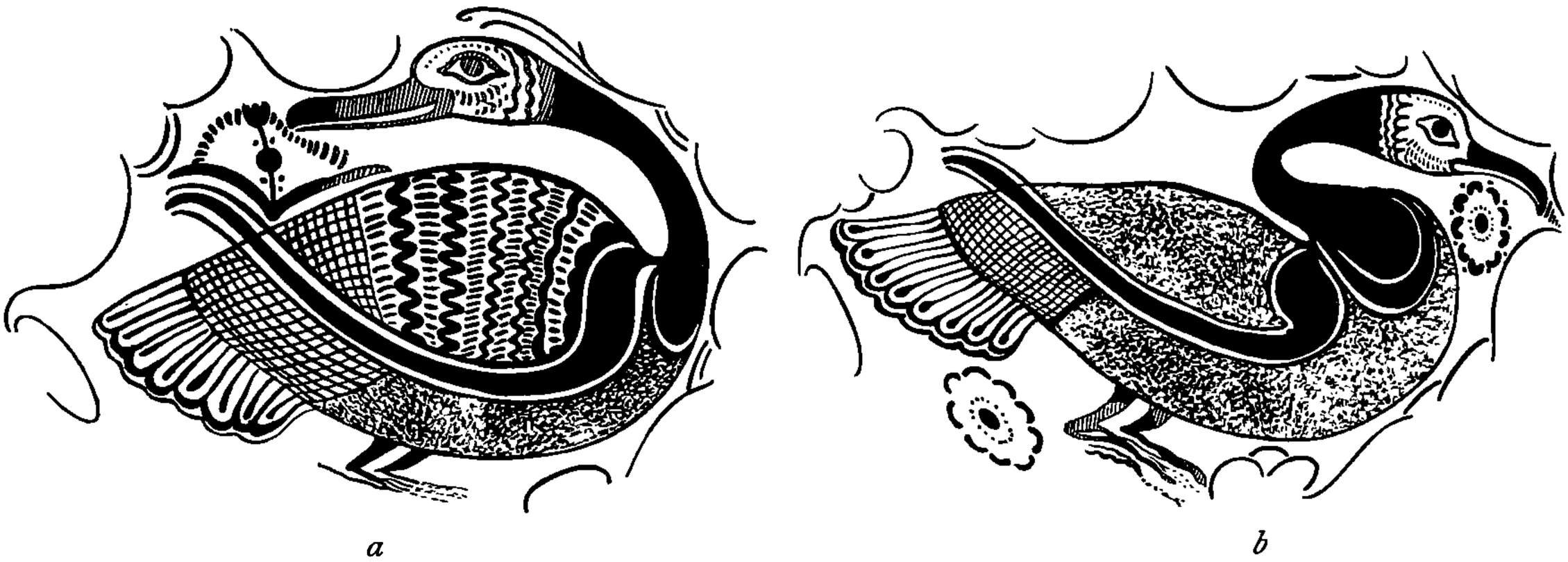
That this vessel, in fact, should be grouped with those of the Knossian palatial class is further shown by the character of another fine painted 'amphora', less perfectly preserved, found in the same tomb (No. VI). Its designs, which present a frieze of linked spirals and rosettes round the body, is illustrated below in Fig. 283, p. 340, as a companion piece to a specimen from the North-West borders of the Palace at Knossos, displaying a similar frieze taken over from the wall-decoration of the preceding Age.

'Palatial' vases from Argos perhaps made there.

The occurrence of two 'amphoras' of the true 'Palace Style' from the site of Argos is itself the more remarkable from the general limitation of these fabrics to the site of Knossos itself. Their size makes it in itself less probable that the vases were imported from oversea than that

[1] The dots that here accompany the stalk suggest a relationship to the dotted line of the L. M. III *a* spray, Fig. 264, 1. It differs from the single-stemmed Mycenaean type such as we already see at Tell-el-Amarna.

they were executed on the spot by a craftsman trained in the Palace *atelier* of Knossos. The close relationship of the two cities, due to their geographical opposition, or, rather, confrontation, commanding respectively



a *b*

FIG. 277 *a*, *b*. DUCKS AND CONVENTIONAL SPRAYS AND FLOWERS ON 'AMPHORA' FROM ARGOS.

the principal ports of the Island and of the great Mainland peninsula, was destined at a much later date to give birth to a close alliance.[1]

It might be said that if no 'Palace Style' vases had been found with designs of this class taken from these Nilotic scenes, the abundant remains of such subjects belonging to the succeeding Period would have sufficiently justified the assumption that they were already in existence.

Late 'amphora' from Knossos with Nilotic ducks.

The most outstanding example of these later works has been due to the recent explorations of Late Minoan house remains in the area to the West of the Palace just within the borders of the newly discovered Enceinte Wall.[2] In one of these were found considerable fragments of the body and neck of a painted jar of exceptional dimensions. The large section preserved of the middle zone (Fig. 278) shows two swimming ducks approaching one another in an environment of conventionalized papyrus tufts of a class approaching the Tell-el-Amarna type in vogue about the end of the first quarter of the Fourteenth Century B.C.

Already on the Argos amphora, Fig. 277, *a*, we see the plumage of the waterfowl geometrically decorated and their wings traversed with zig-

[1] An interesting record of this is seen in the Knossian silver staters and half-staters of the last half of the Fourth Century bearing on one side the head of Hera as on the coins of Argos and on the other the Labyrinth. It may be suggested that the inscription AP placed above the KNΩΣIΩN of the latter type actually record the alliance.

[2] See above, p. 49 seqq. and p. 51 Plan. The house was nearly opposite the angle formed by the North-West Entrance.

zagging lines or covered with hatched and reticulated patterns. All this, indeed, is in keeping with the ornamentalized water-plant forms amidst which they are set. In the present instance, as seen in Fig. 278, this tendency is

FIG. 278. SWIMMING DUCKS AND CONVENTIONAL PAPYRUS FROM MIDDLE ZONE OF LARGE PAINTED JAR, FOUND IN PRIVATE HOUSE WEST OF PALACE, KNOSSOS.

carried to excess. The black wave pattern on the body of the bird to the left—which represents a late stage of the 'adder mark' in which the dots are omitted—is quite disproportioned, and the double band of what may be a still more degenerated version of the same motive on the other duck is almost equally staring and barbaric. It seems possible that a still abiding sense of the sacral value of these marks had contributed to this exaggeration.

While, as already pointed out, the papyrus tufts here given, such as that with the thick curve at the apex of a stem, approximate to the diffused 'Mycenaean' types, the decorative bands round the neck and above the rim reproduced here in Fig. 279, still retain much earlier associations. They present in an unchanged form the tradition of the interlocked curves of the original metal-work motive out of which both the 'Sacral Ivy' and the 'Ogival Canopy' were evolved.

The apparently inconsistent characteristics of this exceptional jar make it difficult to classify it with precision. The waterfowl certainly present an analogy to those on the 'amphora' from Argos—the zigzagging pattern on the bird to the right, indeed, might derive from that of Fig. 277, *a*, where the same hatched work accompanies it. The fine metal-work tradition visible on the rim is itself a palatial sign.[1] On the other hand, it is in itself

[1] Compare the bold metal-work band of the same class on the 'Palace Style "amphora"', Fig. 238, p. 303 above.

improbable that a vessel with such affinities and of this exceptional calibre should have been executed for a small house-owner on the Palace border in the epoch immediately succeeding its final overthrow. It may seem best

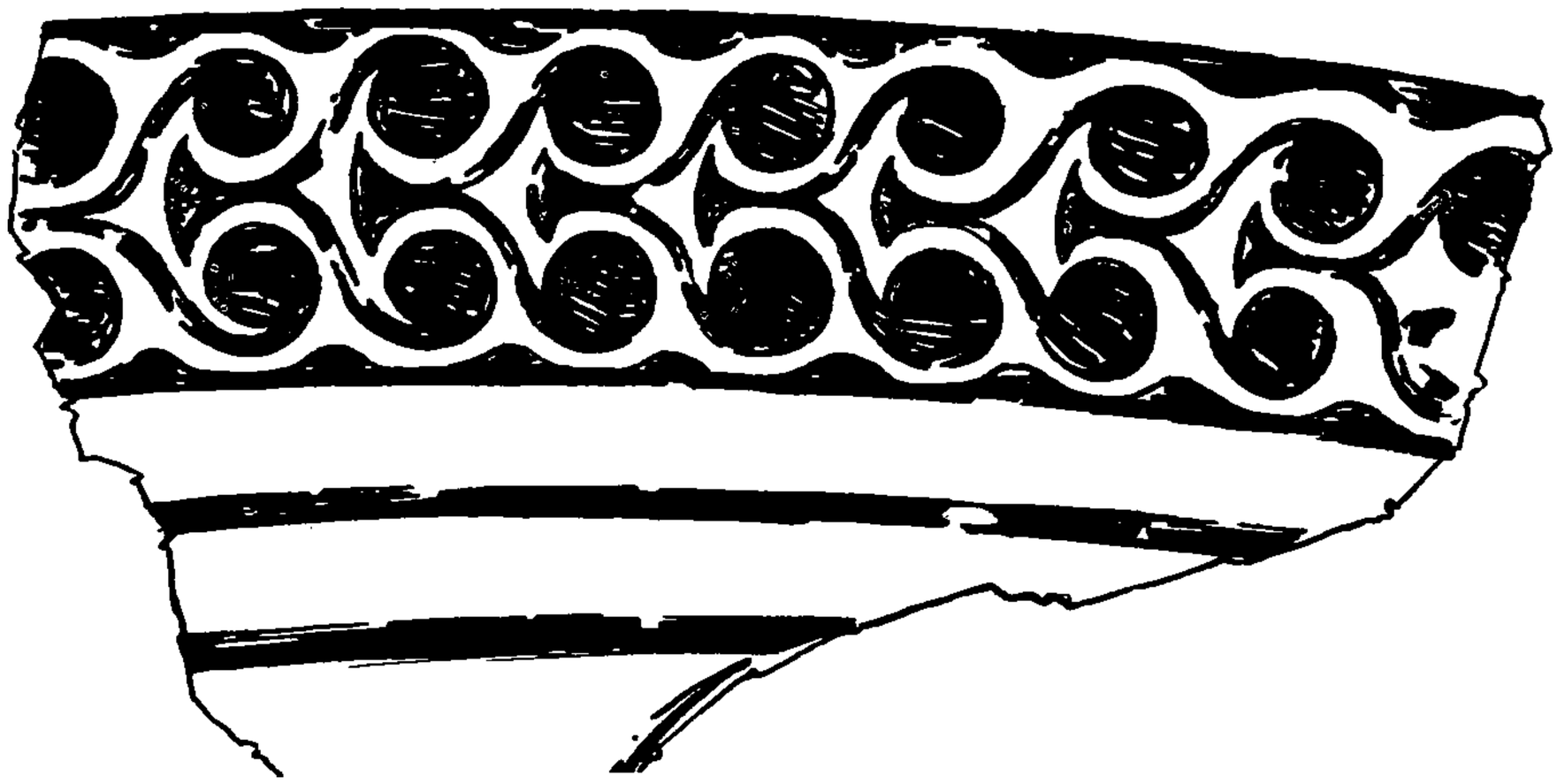


FIG. 279. SECTION OF RIM OF THE LARGE JAR DEPICTING WILD-DUCKS.

to group it with a certain number of painted clay goblets, some of which are illustrated in the succeeding Section, which from their place of finding, either on the Palace border or within its limits, seem to have been actually in use in the last Age of its existence, but which typologically fit on rather to the succeeding L. M. III phase. The transition between the successive Minoan ceramic stages always eludes too strict a delimitation, and it is natural to expect signs of decadence in the last days of the Palace history. But we are a long way from the taste of the small burgher to whom the 'House of the Frescoes' was due.

Other L. M. III versions of similar Nilotic motives.

Among the early fabrics of L. M. III *a* Period that succeeded those of the true 'Palace Style', Nilotic waterfowl of a similar class are of frequent occurrence. As examples of such may be mentioned a whole series of painted clay *alabastra* of a high, late shape from the Phaestos Cemetery[1] with similar wild ducks, either seated or flying, amid conventional representations of papyrus thickets. Here the water is indicated either by parallel waved lines, according to the Egyptian convention,[2] or by the

[1] L. Savignoni, *Mon. Ant.*, xiv (1904), Plates XXXVII, XXVIII, and p. 568 seqq. A duck with a similar fan-tail appears in a sarcophagus from Palaikastro (R. C. Bosanquet, *B.S.A.*, viii, p. 297 seqq. and Pl. XIX) with a fish in a parallel compartment.

[2] These conventional lines of zigzags survived to play an important part in early Geometrical decoration. Cf. Savignoni, *op. cit.*, p. 573; S. Wide, *Nachleben mykenischer Ornamente*, *Ath. Mitth.*, 1897, p. 233 seqq., calls attention to the 'Mycenaean' origin of this Geometrical motive but without any idea of its true explanation.

introduction of fish below or beside the waterfowl, Fig. 280, *a*, *b*, *c*. Fragments of bowls with ducks and papyrus of a parallel class have also been found on the site of Knossos,[1] and some of these specimens may well come within the limits of L. M. II. Sometimes the plants with which these fan-tailed birds are associated are transformed into lilies.[2]

That the Nilotic scenes to which these types belong were in their variant forms becoming

a

b

c

FIG. 280 *a*, *b*, *c*. WATERFOWL, FISH, CONVENTIONAL PAPYRUS AND WATER ON PAINTED CLAY 'ALABASTRA': PHAESTOS CEMETERY (L. M. III *a*).

a feature of the wall-paintings of the latest Age of the Palace may be inferred from the use of a similar papyrus-reed background for the seated Griffins on the walls of the 'Room of the Throne'. In the fields of the painted clay sarcophagi of the ensuing Period, which were naturally well qualified to reflect the current subjects of wall-paintings, such scenes had a general vogue. A good example has been long known in the painted

[1] See, for instance, D. Mackenzie, *J. H. S.*, xxiii, p. 198, Fig. 14.

[2] E.g. Maiuri, *Ialysos*, p. 47, Fig. 50.

Nilotic scene on L. M. III 'larnax'.

'*larnax*' from Anoia in the Mesarà district,[1] where fish as well as ducks occur beside the palmette-like papyrus clumps (Fig. 281). These themselves are clearly the succeeding stage of designs like Fig. 272. On a clay

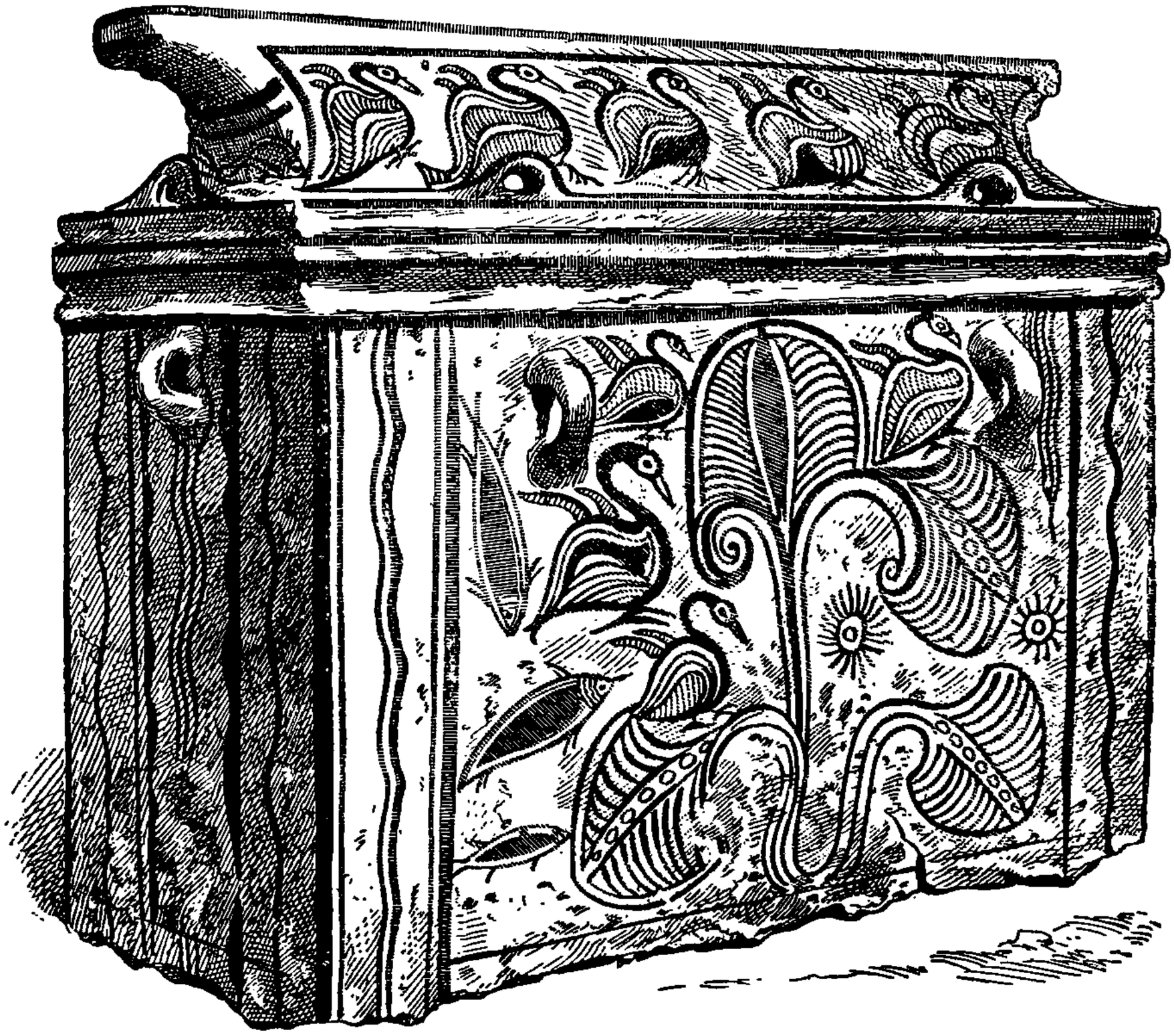


FIG. 281. PAINTED CLAY SARCOPHAGUS ('LARNAX') FROM ANOIA (L. M. III *a*).

coffin in the same style from Ligortino, on the borders of the same Cretan region, the butterfly of the Nile pieces is also introduced.

Similar subjects diffused from Crete to Rhodes and Cyprus.

Like the chariot scenes—on which elements from the aquatic groups also often intrude—these designs were taken over on to the characteristic 'kraters' of this later Minoan style that was diffused over the Easternmost Mediterranean Basin to Rhodes and Cyprus. Similar waterfowl also occur on vases of late date from Mycenae, but separated from the other elements of the Nilotic group. Its centre of distribution must unquestionably be traced to Minoan Crete and its earliest ceramic models to designs on vases of the advanced 'Palace Style'. On these they reflect the influence of this Nilotic cycle on wall-painting.

[1] P. Orsi, *Urne funebri Cretesi*: *Mon. Ant.*, i (1890), Pt. I. Cf., too, Perrot et Chipiez, *Grèce Primitive*, p. 930, Fig. 490, from which Fig. 281 is reproduced.

Absence of imported 'Palace Style' vases in Egypt.

The fact that hitherto examples of 'Palace Style' vases have not come to light in Egyptian deposits must not, itself, be taken to indicate that relations between Crete and the land of the Pharaohs suffered any interruption at this time. It is possible that vessels of this stately class were made in a special way for the great Palace itself. In any case, the evidence of the continued importation of Egyptian objects of Art into Crete was never greater. More imported alabaster vases of XVIIIth Dynasty fabric occurred in the Royal Tomb at Isopata[1] (L. M. II*b*) than have been found in any other deposit outside Egypt. As a supplement to this, it may be added that, among the comparatively few relics found in the latest Minoan grave pit of the 'Temple Tomb' of Knossos, was included a pedestalled Egyptian vase of the same material and date.[2] It was associated with a painted flask of characteristically 'Palace Style' fabric, like the 'amphoras' of the Isopata Tomb.[3]

But abundant evidence of continued Egyptian imports.

Architectonic Motives on 'Palace Style' Vases: taken over from L. M. I Wall-decoration.

1. Spiral Bands.

Architectonic features.

That the conventionalized plants and waterfowl above illustrated on vases of this 'Palace Style' were largely taken from Minoan versions of Nile pieces existing on the walls is a fair assumption. We have convincing evidence that both the purely architectonic features of the Palace Sanctuary, some of them directly connected with its central cult, together with the ritual objects themselves, were taken over into the ceramic designs of this class.

It has been shown above that a partial restoration and extensive redecoration of the building had taken place towards the close of L. M. I *a*, in order it would seem to repair the damage caused by an earthquake shock at that epoch. The most constantly recurring decorative feature of this work of renovation was certainly the friezes consisting of finely drawn bands of running spirals enclosing rosettes in their central coils. It is not surprising therefore to find this feature repeated on the middle zone of 'amphoras' such as that from the North-West Palace border shown in Fig. 282,[4] where a looped band with similar rosettes occupies the zone below.[5]

Spiraliform bands of L. M. I redecoration imitated.

[1] See A. E., *Preh. Tombs of Knossos*, i, Pl. LIX (*Arch.* xcix). [2] See § 117 in Pt. II.

[3] See above, p. 308, Fig. 243 and p. 327, Fig. 270.

[4] As reconstituted by Kyrios Salustros in the Candia Museum. The height of this 'amphora' is 82 centimetres.

[5] These looped bands recall the decoration of a bronze ewer of somewhat earlier date from the 'N.W. Treasure House' (*P. of M.*, ii, Pt. II, pp. 645, 646, and Fig. 411). Part of a rhyton of L. M. II date with this kind of ornament occurred in a house explored by Mr. Hogarth on the Gypsàdes Hill (*B. S. A.*, vi).

The reduplicated single-Axe blades on the shoulders of the vase are paralleled above.[1]

It is of great interest, moreover, to find a similar band of running

FIG. 282. 'AMPHORA' FROM NORTH-WEST PALACE BORDER SHOWING SPIRAL FRIEZE OF ARCHITECTONIC CHARACTER.

FIG. 283. 'AMPHORA' FROM ARGOS.

spirals and rosettes on the amphora, Fig. 283, found in a tomb of the Deiras Cemetery at Argos together with that depicting Nilotic ducks already described.[2] The beautiful vegetable shoots that appear round the lower circumference of this vase themselves suggest a comparison with those between the floral sprays on the highly decorative 'amphora' from the Royal Tomb at Isopata, Fig. 270 above, where the characteristic taper form of the Argos vessels is also illustrated.

Finally the rosettes themselves that form such a recurrent feature among the motives of this L. M. I. redecoration occupy a prominent place in isolated positions on smaller vessels belonging to the palatial style. A

[1] See pp. 319–21, Figs. 260, 262 and cf. p. 347 seqq.

[2] See above, p. 320, Fig. 260.

good example is supplied by a globular three-handled ewer, from the 'Tomb of the Double Axes'.[1] Rosettes dependent on the same system of wall-decoration also appear on contemporary pedestalled goblets.

FIG. 284. 'AMPHORA' FROM BORDERS OF NORTH-WEST SANCTUARY HALL' SHOWING SHIELD DECORATION.

2. Influence of 'Shield Frescoes'.

Influence of 'Shield Frescoes'.

Attention has already been called to the reaction on ceramic Art of the 'Shield Frescoes' that stood out so prominently on the loggias of the 'Grand Staircase'.[2] A close adaptation of the shield laid across a spiraliform band, in a Late Minoan polychrome style specially designed for funereal use, has already received illustration.[3] It has been further shown in the preceding Volume of this work[4] that a fragment of a painted clay *alabastron* from Phylakopì in Melos presents the shield design in company with a decorative spray of the

[1] See below, p. 354, Fig. 297 *c*.

[2] See *P. of M.*, iii, p. 301 seqq.

[3] A. E., *The Tomb of the Double Axes*, p. 26 seqq. and Coloured Plate XXIII (see, too, *P. of M.*, iii, p. 303, Fig. 196).

[4] *P. of M.*, iii, p. 312.

L. M. I *b* class combining the *waz* and 'Ogival Canopy', while another fragment of a similar vessel with asterisks beside the shield was found at Gezer, in Palestine.

It has been possible now to complete the fragmentary remains of a magnificent 'Palace Style' amphora, from the borders of the 'North-West Sanctuary Hall', presenting a further decorative evolution of this stately motive (Fig. 284) coupled with spirals and rosettes like those of Figs. 282, 283.[1] The 8-shaped shield itself had also a religious association, over and above its significance as a symptom of the military parade of the later Palace lords.

Double Axes and Associated Cult Objects on 'Palace Style' Vases.

Double Axes and other cult objects reproduced.

Partly in the upper filling of the Tenth Magazine, underlying the Southern border of the 'Sanctuary Hall', and partly above the pavement of the neighbouring section of the Hall itself were found the scattered remains of a tall jar presenting the sacred weapon as the central theme of its decoration. Happily, sufficient fragments of this were found to supply materials for the full restoration of this stately vessel as now set up in the Candia Museum [2] (Fig. 285, *a*, *b*). A section of it showing one of the Double Axes is given in Fig. 286.

It is of the 'pithos' type, with four handles round its upper border and four near the base. Four Double Axes with high shafts are ranged between the upper handles and four more with low handles are placed symmetrically between them. Rosettes appear in the field beside them and, in two cases apparently, were superposed over the shaft for decorative purposes. Reeds rise from the ground, mostly of naturalistic form, but with fringed leaves, very characteristic of the L. M. II frescoes as illustrated, for example, by those associated with the Griffins in the 'Room of the Throne'.[3]

The reduplication of the edges of the blades, whether or not it refers to a divine pair, is a recurring feature in Double Axes used as objects of worship. They thus appear in the libation scene of the Hagia Triada Sarcophagus.[3] There, too, as here, diagonal bands are drawn across the

[1] The reconstitution of this 'amphora', now set up in the Museum of Candia, is due to the patient skill of the *formatore*, Kyrios Salustros.

[2] The complete restoration of this vase, as in many other cases, is also due to the skilful work of Salustros. A fragment of this vase showing a Double Axe was reproduced in my *Report*, *Knossos*, 1900 (*B. S. A.*, vii), p. 53, Fig. 15, *a*.

[3] See *P. of M.*, i, p. 440, Fig. 317.

a *b*

FIG 285. LARGE JAR FROM NORTH-WEST SANCTUARY, WITH REPEATED DOUBLE AXES ACCOMPANIED BY ROSETTES AND REEDS.

'wings' of the axes. Bands of the same kind are frequently incised on Double Axes of the votive class, such as those found in the Cave Sanctuary of Psychro. These transverse bands, which are never seen on the axes made

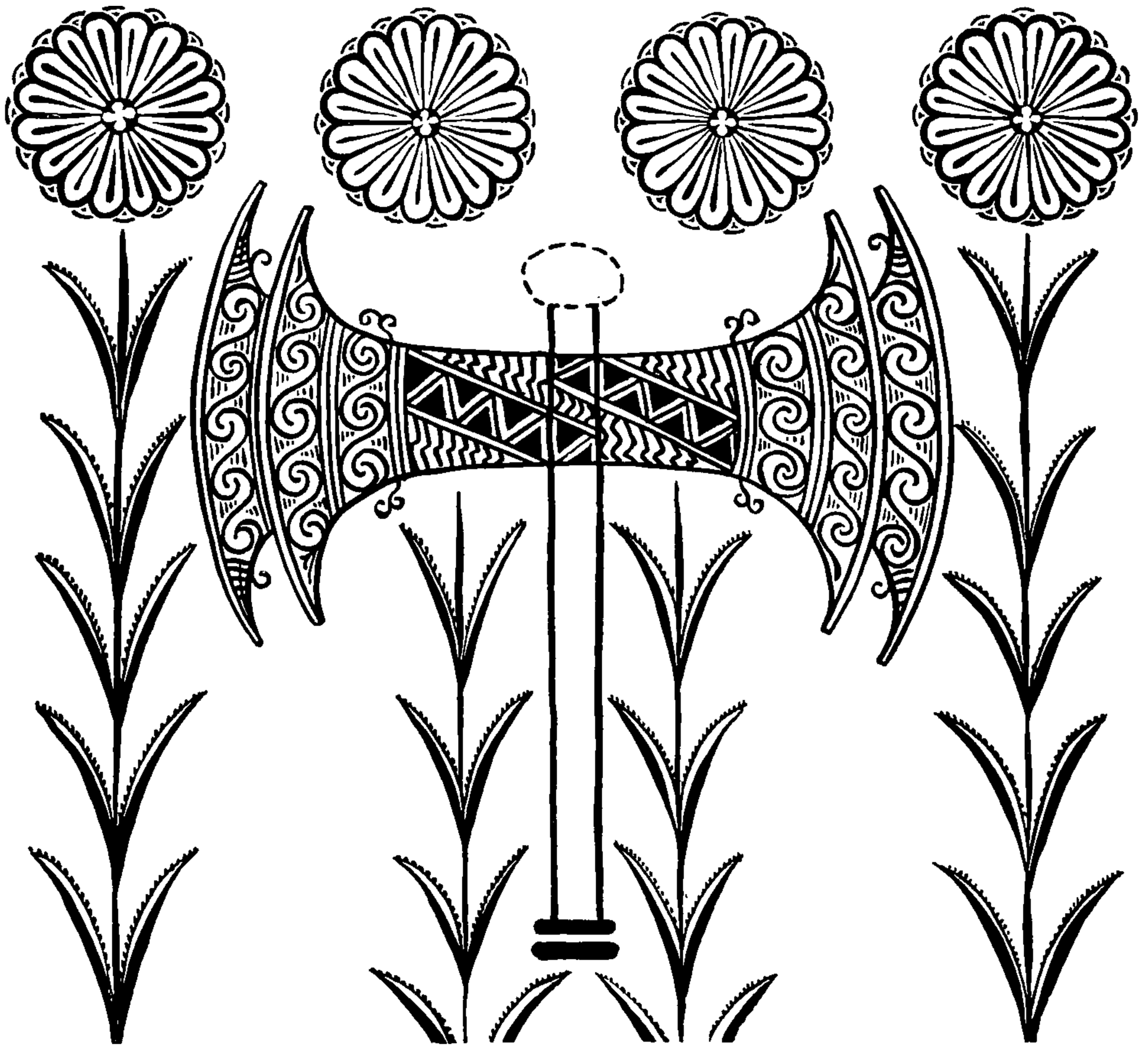
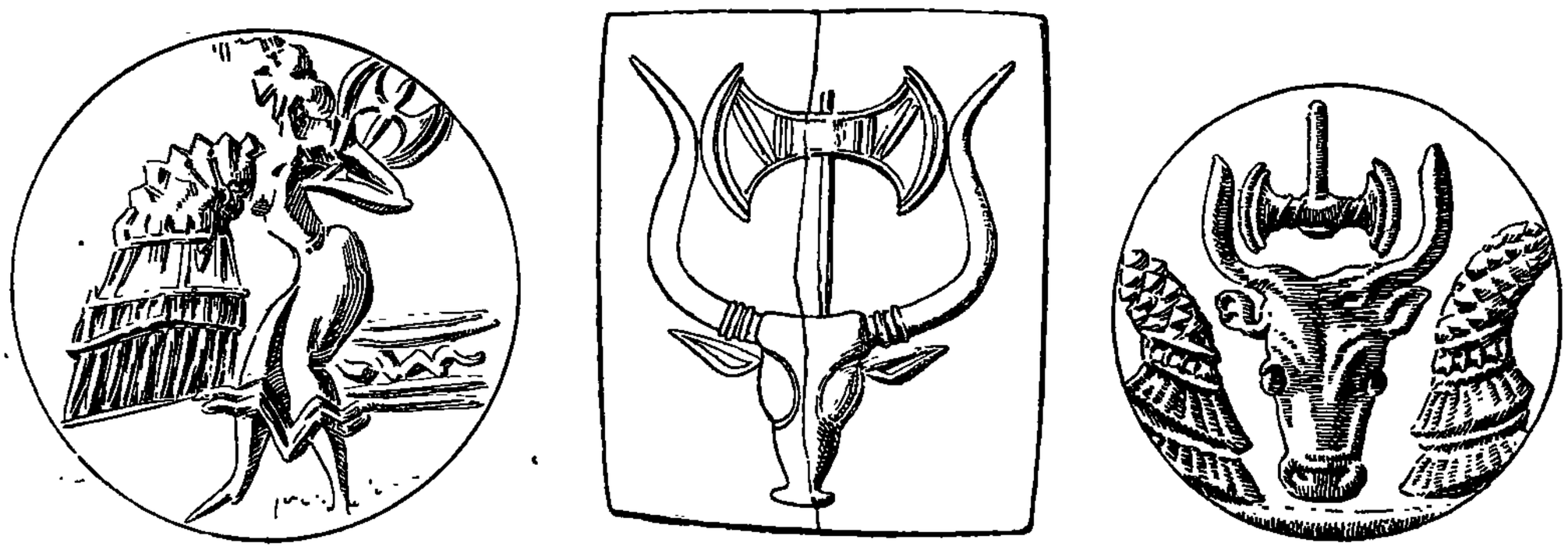


FIG. 286. SECTION OF 'AMPHORA' DESIGN ON FIG. 285 WITH DOUBLE AXE ON LOW STAND.

for actual use, seem to represent some kind of 'ribbon' wound round the blade for ritual decoration.

Axes of this reduplicated type frequently appear on signets and seal-impressions, at times—as in the case of the large gold ring from Mycenae—in the field above the Minoan Goddess. On a clay impression from the Domestic Quarter, Fig. 287, *a*, the Goddess, or a votary, holds it on her shoulder. On the broken agate intaglio from the North-West Treasure House, Fig. 287, *b*, this axe is seen rising from a bull's head, on the lentoid *c* it is set in reversed position above the head of a bull, on each side of

which appears a sacral object like that held by the Goddess in *a*. In *b* and *c* the diagonal bands are clearly visible.



a *b* *c*

FIG. 287 *a–c*. DOUBLE AXES ON GEMS ($\frac{2}{1}$). *a*, *b*, KNOSSOS; *c*, ARGOS.

Once more we have an indication of the way in which these stately vessels of the 'Palace Style' fitted in with the interior adornment of the building.

By the South-West Palace angle were found the remains of another jar, repeating what must certainly be restored as the reduplicated blade of the Double-Axe motive together with other objects relating to the cult. Unfortunately the remains of this vessel were too imperfect to allow the restoration of the designs in a connected form, but some of its elements are shown in Fig. 289.

FIG. 288. CULT SCENE WITH VOTARY SUMMONING DIVINITY BY CONCH-SHELL. CRYSTAL LENTOID: IDAEAN CAVE.

Conch-shells and sacred trees.

It has been already noted that the two whorl-shells, *d* and *e*—one on its way to the 'corkscrew' type—should here be certainly regarded as the conch-shell used in Minoan cult for summoning the divinity. Such 'trumpet' shells are themselves of frequent occurrence in Minoan shrines,[1] and the religious function is well illustrated by the design on a crystal from the Idaean Cave here repeated in Fig. 288.[2] The conch-shell *d* is immediately below the Double Axe end.

[1] As, for instance, in the little shrine near the 'Magazine of the Lily Jars', *P. of M.*, i, pp. 580, 581, and Plan, p. 575, Fig. 419. Another was found in the early *Sacellum* at Phaestos. Little triton shells of painted clay occurred amongst the relics found with the 'Miniature Terra-cotta Shrine' in the 'Loom Weight Area'.

[2] See above, p. 210, Fig. 162, and *P. of M.*, i, pp. 221, 222.

The special object of cult in this case is the group of three Cypress-like trees shown behind the altar and in front of which are set the 'sacral horns' and altars, while a votary brings down the divinity by blowing blasts

FIG. 289 *a–e*. FRAGMENTS OF LARGE 'AMPHORA' FROM SOUTH-WEST PALACE ANGLE.

from a conch-shell. It is therefore specially interesting to note that the design on another fragment of this palatial vessel shows a parallel group, consisting of three leafy stems, above the horns (Fig. 289, *c*).

'Rhyton' type.

Equally ritual in its aspect is the object delineated in Fig. 289, *a*, resembling a funnel-shaped 'rhyton' with two loop-like handles, from one of which hang two sections of a cord. The reticulated design on an associated fragment, Fig. 289, *b*, remains enigmatic. It closely resembles that on the apron of the 'pard' Goddess from the Temple Repository[1] and recalls some of the textile patterns on robes worn by the personages on the 'Procession Fresco'.

[1] *P. of M.*, i, pp. 502, 503, Figs. 360, 361.

Discovery of Hoard of Gold Double-Axe Heads in Sacred Cave, E. of Knossos: Foliage of Sacred Tree as Decorative Element.

The triple group of sacred trees as represented by the sprays rising from the 'Horns of Consecration' on the 'amphora' fragment, Fig. 289 *c*, recalls conventional equivalents of olive-trees as seen on signet types of the

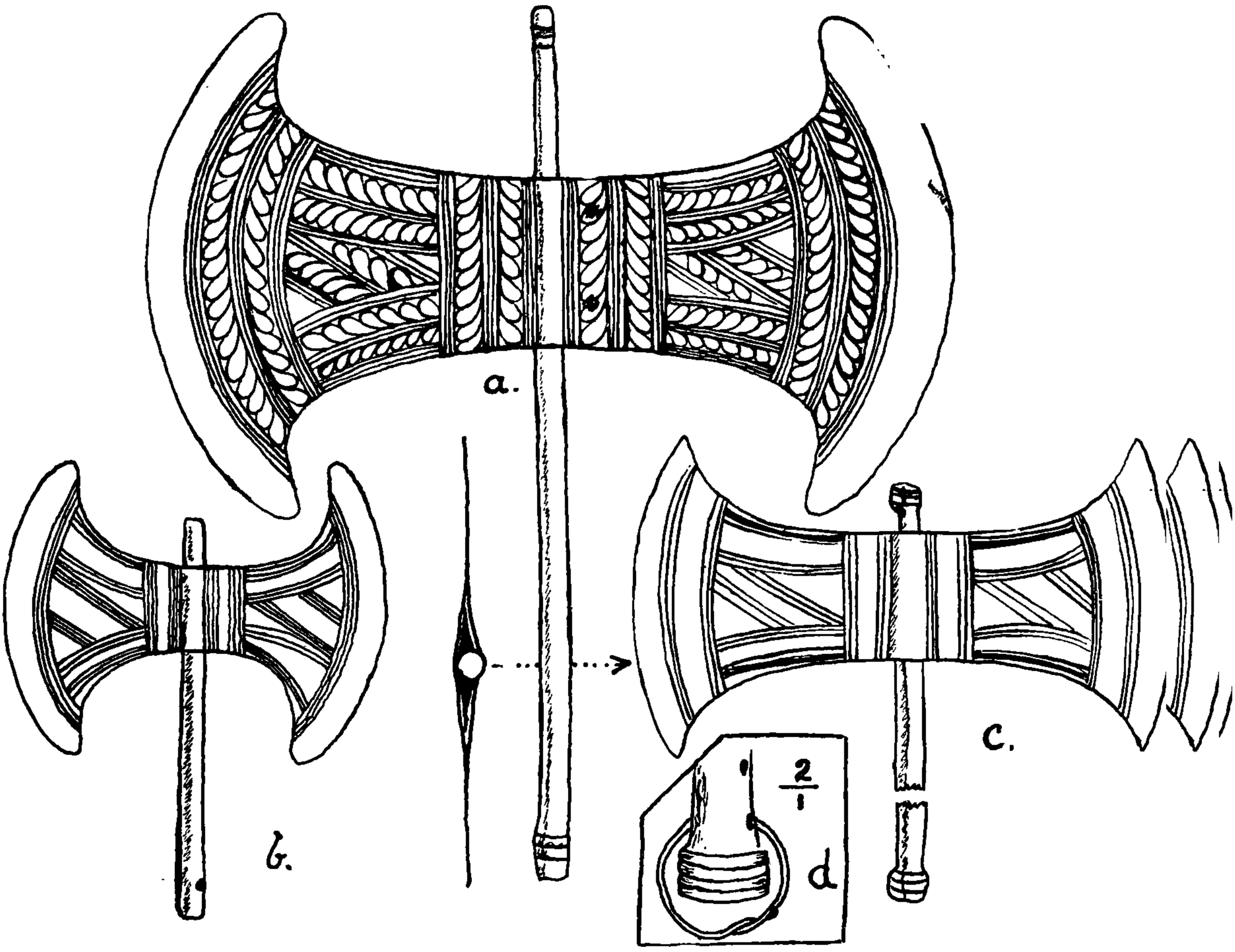


FIG. 290. VOTIVE GOLD DOUBLE-AXES FROM CAVE SANCTUARY, ARKALOKHORIO, S.E. OF KNOSSOS ($\frac{6}{5}$). WIDTH OF *a* 8·45 CM.: HANDLE 9·5 LONG. (DRAWN BY MISS M. MONEY COUTIS.)

Hieroglyphic class.[1] The association of these symbolic sprays, with the Double-Axe Cult observable in the case of this fine 'Palace Style' Vase, is not only traceable on another 'amphora' of the same series reproduced in Fig. 291 below, but is also illustrated in a most direct manner by the decorative elements of a gold Double-Axe blade of a miniature votive kind (Fig. 290 *a*) forming part of a remarkable hoard discovered in the Cave

[1] See below, Pt. II, pp. 717, 718 and Figs. 698–700.

of Arkalokhorio, South-East of Knossos, already known for votive deposits.[1] Here was found, in May 1934, a deposit containing—besides silver and many bronze specimens—a score or so of gold axes of this kind, some of which are given in Fig. 290.[2] A pit has since come to light containing a still larger bronze deposit, including, besides more decorative axe-blades (see Fig. 315 *bis*, p. 378), other votive specimens 75 centimetres in width, and fine swords of actual use about a metre in length.[3]

Hoard of Gold Votive Axes.

As will be seen from Fig. 290, *b*, *c*, the Axes show transverse stripes across their wings such as are usual in this votive class,[4] and are a well-marked feature of the great Palace Style jar (Fig. 285 above), a record of coloured bands round consecrated weapons. Of special interest are the bands of the larger Axe of Fig. 290 (*a*), since in this case they reproduce the foliation of the Sacred Tree, as seen in Fig. 289 *c*. It will be shown that on another 'amphora' of the Palatial series, Fig. 291, to be described below, the same foliation is used to frame the conventional representation of pillar shrines of the Double-Axe. There can be little doubt that, as applied to the Axe blades themselves, they may be interpreted as an allusion to a triple group of trees—perhaps outside the grotto that contained the sanctuary.

Gold wires, attached by means of holes at the base of the handles, and bent into a loop (perfectly preserved in one instance, *d*) show that these miniature gold axes were hung to the walls of a shrine. They thus afford a parallel to the bronze axes with their perforated ends[5] associated with the votive statuettes of the Goddess described above.

'Palace Style': Architectonic Motives taken from Frescoes depicting Pillar Shrines of Double-Axe Cult.

Pillars of Double-Axe cult imitated from frescoes.

Of great interest in the same religious connexion is the 'amphora', Fig. 291, found in the 'Royal Tomb' at Isopata, North of Knossos. This vessel is 48 centimetres high and the middle part of its body is surrounded with designs of an architectural character and which, as already pointed out in

[1] J. Hatzidakis, *B.S.A.*, xix, p. 35 seqq.

[2] I am greatly indebted to Miss M. Money Coutts and Miss Eccles, Students of the British School, for supplying me with excellent drawings and photographs. Many of the axes (including Fig. 290 *a*) were of good red gold; in other cases it had a yellower hue. The axes, though of the votive class, were of exceptionally solid make. Seven specimens together weighed 78 grammes. The handles were hollow, and bored for the wire loops. Much gold leaf also occurred.

[3] This information is due to the courtesy of Dr. Sp. Marinatos, as also the photographs reproduced on p. 378 below.

[4] Compare, too, one of the Double-Axe heads on the H. Triada Sarcophagus (*P. of M.*, i, p. 440, Fig. 317).

[5] See above, p. 198, Fig. 153.

my work on the Tombs of Knossos,[1] draw their inspiration from a particular class of Minoan wall-paintings, all of small dimensions, representing Pillar Shrines of the Double-Axe cult. The foliate bands like those of the Axe, Fig. 290 *a*, recall those of the Sacred Trees as seen on the fragment, Fig. 289 *c*.

FIG. 291. 'AMPHORA' FROM 'ROYAL TOMB', ISOPATA, WITH ARCHITECTURAL DESIGNS RELATING TO PILLAR SHRINE OF DOUBLE AXES.

The central theme is the upright column or pillar of the sanctuary, with ritual Ax e[2] inserted into it on either side, such as already appear on the remains of two panels found beneath the later floors of the 'Kaselles' of the Thirteenth Magazine,[3] there belonging unquestionably to the earlier phase of M. M. III. The same motive of the sacred weapons stuck into pillars also recurs on the painted stucco fragment found by Schliemann in the area of the Grave Circle at Mycenae,[4] where female spectators are seen in what appear to be some kind of theatral 'boxes' looking on at the bull sports held in honour of the Goddess. The chequer pattern here taken from Minoan shrine façades is a derivative of an Egyptian façade decoration of a textile origin—the copy of mats hung in front of buildings. It has a long history both in Crete and on the Mainland.

As seen on the 'amphora', Fig. 291, the chequer-work is quite

[1] *The Prehistoric Tombs of Knossos*, ii (Quaritch, 1906: also *Archaeologia*, vol. lix), pp. 159–61, and Fig. 144. I there compared the later revivals as seen in Furtwängler und Loeschke, *Myk. Vasen*, Pl. XXIII, 322, 325, 327.

[2] These resemble the now current Syrian form of single Axes (see below, p. 419 seqq., Fig. 347 and p. 319 above).

[3] See *P. of M.*, i, p. 443 seqq. (Figs. 319, 321) and *ibid.*, ii, Pt. II, pp. 600, 601, and Fig. 373, *a*, *b*.

[4] Rodenwaldt, *Ath. Mitth.*, xxxvi (1911), p. 222 seqq., and Pl. IX; *P. of M.*, i, pp. 444, 445, and Fig. 320; ii, Pt. II, p. 410, Fig. 236, and pp. 601, 602.

inappropriately inserted on the upright bars that stand for the pillars into which the Double Axes were stuck. The outer edges of the axes themselves, on either side of these bars, become here the centres of elongated oval figures—the whole suggesting the familiar half-rosettes of Minoan friezes with their triglyph-like divisions. On some of the upright bars of the 'amphora', indeed — of which a section is developed in Fig. 292— we see a running spiral ornament that at times appears in relief on the stone triglyphs.

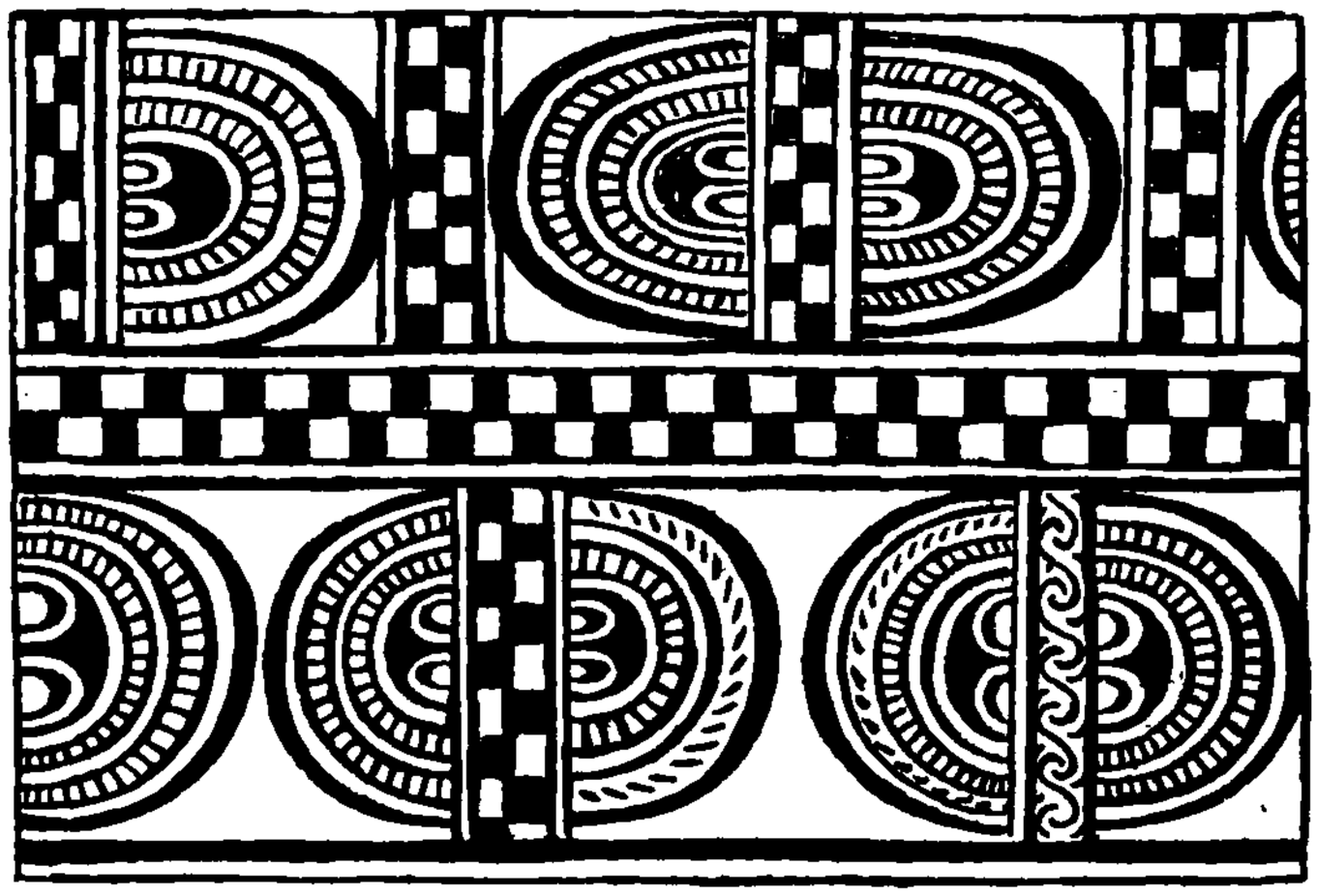


FIG. 292. SECTION OF 'AMPHORA', FIG. 291, DEVELOPED.

In the lower line these figures follow one another exactly as does the architectonic version on Minoan friezes. As in the case of the half-rosettes [1] the limit of division at the end of the group is here, too, on the side of the vertical end of the wing and not—as might have been supposed—at the rounded end of a linked pair.

'Pillar Shrine' Friezes of 'Palace Style' surviving in Decorative Motives of Late Mycenaean Bowls.

Survival of Pillar Shrine motives on late bowls from Mycenae.

This 'Palace Style' frieze has a curious interest from its unquestionable relation to a series of ornamental motives that appear on 'kraters' of a Mainland class belonging to a comparatively late 'Mycenaean' epoch corresponding with an advanced phase of L. M. III in Crete. These are specially abundant at Mycenae itself.[2]

Examples of such designs, together with one of the 'kraters', are given in the Comparative Table, Fig. 293. It will be seen that the original post or pillar, representing that into which the ritual Axes were embedded, is at times widened out as in Fig. 293, *a*, *b*. It is there converted into a kind of

[1] See Theodore Fyfe in *P. of M.*, ii, Pt, II, p. 606 and my remarks on pp. 607, 608.

[2] In my account of the 'amphora', Fig. 290, I already referred to the taking over of the friezes there represented on the late pottery of Mycenae (*Preh. Tombs of Knossos*, *Archaeologia*, lix (1906), p. 161.

'triglyph' motive between the loops on either side. Sometimes again, as in Fig. 293, *b*, the 'triglyph' appears without the attached curves.

The chequer-work ornament, incorporated as we have seen in

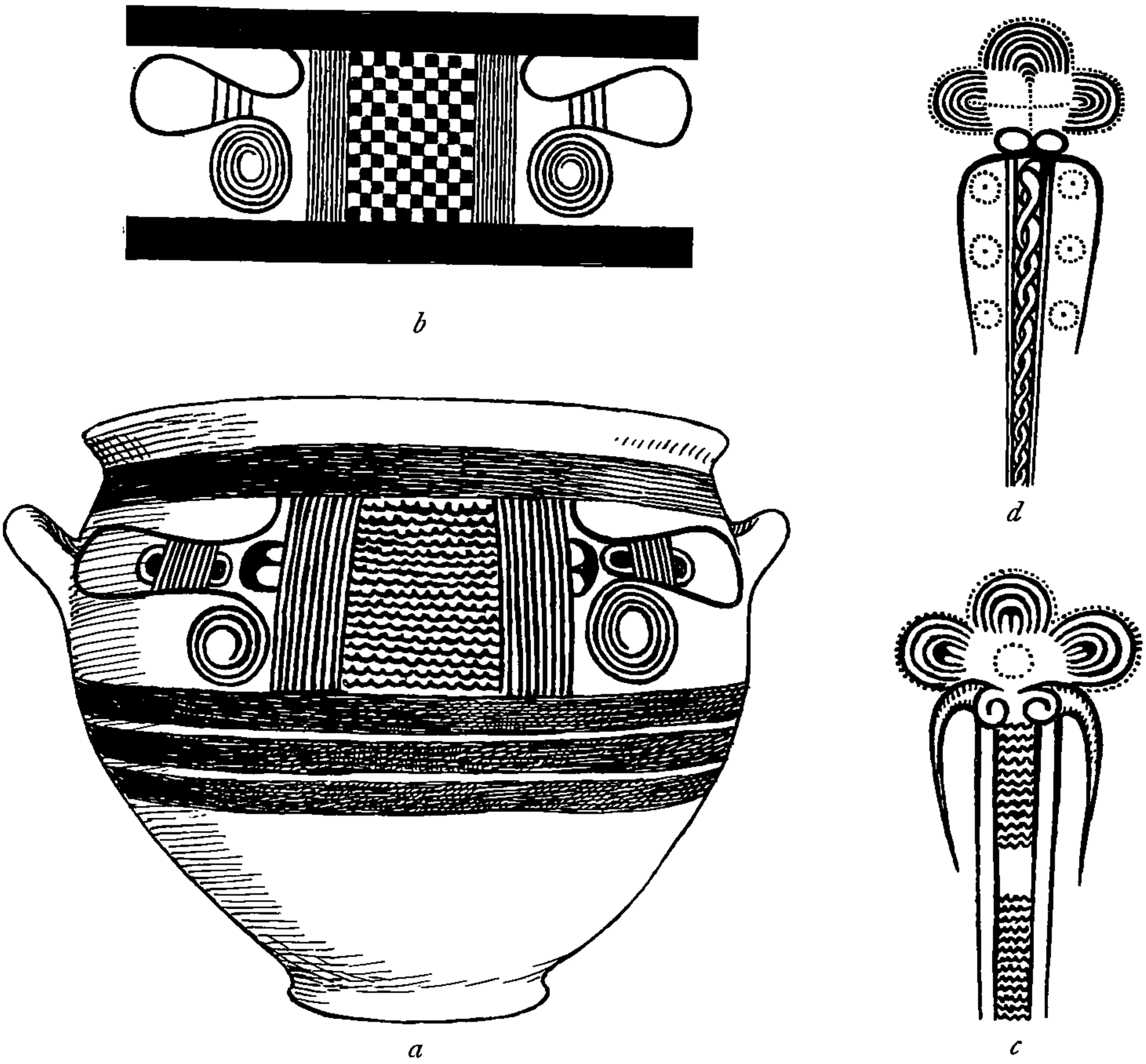


FIG. 293. DESIGNS ON LATE MYCENAEAN 'KRATERS' AND GOBLETS SHOWING EVOLUTION OF FRIEZE WITH RITUAL AXES.

'triglyph'-like bars of the 'Palace Style' 'amphora', Fig. 292,[1]—which, like the Double-Axe 'metope', seems to have temporarily vanished from the ceramic repertory—makes its reappearance in an analogous position in the central space of these later 'triglyphs' (Fig. 293, *b*).

Here, too, we have evidence of motives derived from other designs of

[1] See E. J. Forsdyke in *B.M. Cat. Greek and Etruscan Vases*, vol. i, p. 206 (A 1075). 'In the intermediate period chequers were hardly used at all, but they reappear now' (in Late Mycenaean B) 'and are common in Sub-Mycenaean and Early Geometric pottery. Cf. A 1014, Kalymnos; Ἐφ. Ἀρχ., 1904, p. 29, Fig. 9 (Mouliana), and Vrokastro.'

the palatial cycle. The waved lines of Fig. 293 *a* for instance, thus taken over, are seen on the fine 'Palace Style' jar, Fig. 273 (p. 331), standing in their proper place as the Egyptian equivalent of water, beside the Nilotic papyrus. At times these waved lines are more sparsely espaced.

Appearance of these motives *per saltum*.

A close parallelism is presented by the upright central pillars that are combined with the octopus type (Fig. 293, *c*, *d*) on a contemporary class of Mainland stemmed goblets of which specimens are given below in the Supplement to § 99.[1] These reproduce the waved lines and chequer work of the palatial group, as well as a rope pattern, certainly derived from the linked scrolls of some of the triglyphs, as seen on the 'amphora' Fig. 292. In the example here shown in Fig. 293, *c*, derivatives of the ritual Axes themselves may be recognized above the transformed head of the cephalopod.

The persistence of these religious types might to a certain extent be explained as due to the survival of the same Cult of the Double-Axe pillars to which the original designs refer. That such a cult existed at Mycenae as well as Knossos is shown by the fresco fragment brought to light by Schliemann and illustrated above in Volume II.[2] But the remarkable feature in the present case is that, though the origin of these sacral motives is clear and its source at hand in the 'Palace Style' fabrics of Knossos, no intermediate ceramic links are visible.

These 'Metope' patterns on vases appear at Mycenae *per saltum*, after an interval of years occupied by the earlier phase of the 'Mycenaean' ceramic style proper[3]—the Mainland equivalent of the corresponding L. M. III *a* phase. The later series to which the present 'kraters' and goblets belong follows closely on to the works of the 'Late Revival' to which attention is called above. They belong to the initial stage of (Late) 'Mycenaean B', and their approximate date is shown by the fact that this 'panel' style in a decadent form was still in vogue in the early part of the Twelfth Century B.C., when it was taken over by the Philistine settlers on the coast of Canaan. These Mycenaean vessels can hardly date earlier than 1300 B.C.

This chronological approximation, it may be observed, has a certain interest in relation to the fragment of a 'deep bowl' of this style, here reproduced, in Fig. 294,[4] brought to light in the course of the excavations

[1] See especially C. Blegen, *Zygouries*, p. 146, Fig. 137. These and other variant designs of this series were found on goblets from the 'Potters' Shop'.

[2] P. 601, Fig. 373 *c*.

[3] Mr. E. J. Forsdyke has well defined the class distinction there seen as *Late Mycenaean* A and B. See his Introduction to the *B.M. Catalogue of Prehistoric Aegean Pottery* (1925), p. xxviii seqq.

[4] A. J. B. Wace, *B.S.A.*, xxv, p. 357, Fig. 176 *a*. See above, p. 238.

by the British School beneath the (restored) threshold of the 'Atreus' Tomb, and which was at the time used as an argument for the contemporary dating of the great Vault itself, a work which, if the cumulative evidence supplied by the Minoan re-

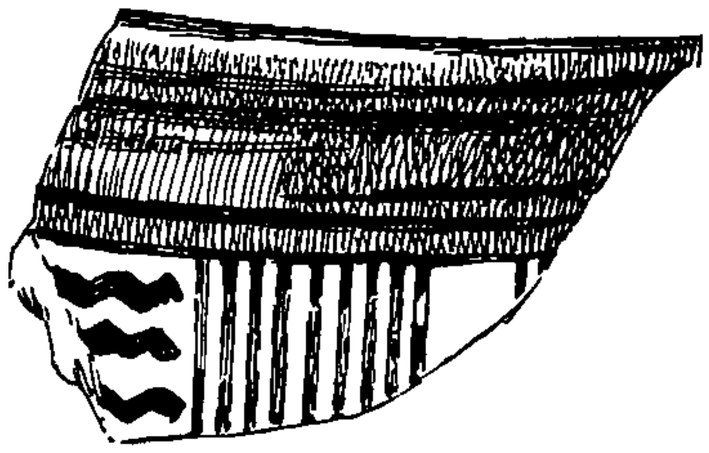


FIG. 294. FRAGMENT FROM UNDER THRESHOLD OF 'ATREUS' TOMB.

FIG. 295. 'KRATER', IALYSOS.

mains at Knossos is taken into account, must be carried back some two and a half centuries earlier.[1]

From the date of these 'L. M. III' 'kraters' and goblets onwards—throughout the whole transitional Age when Iron was superseding Bronze for arms and implements—this 'Metope' pattern—at that time very widely diffused—was in a state of continual decay. The 'krater' from Ialysos[2], Fig. 295, still shows the traditional form of design, though the 'triglyph' bars of the loops have disappeared. A last echo of central pillar and side sprays (on the hut-urn containing the figurine of the Goddess), developed

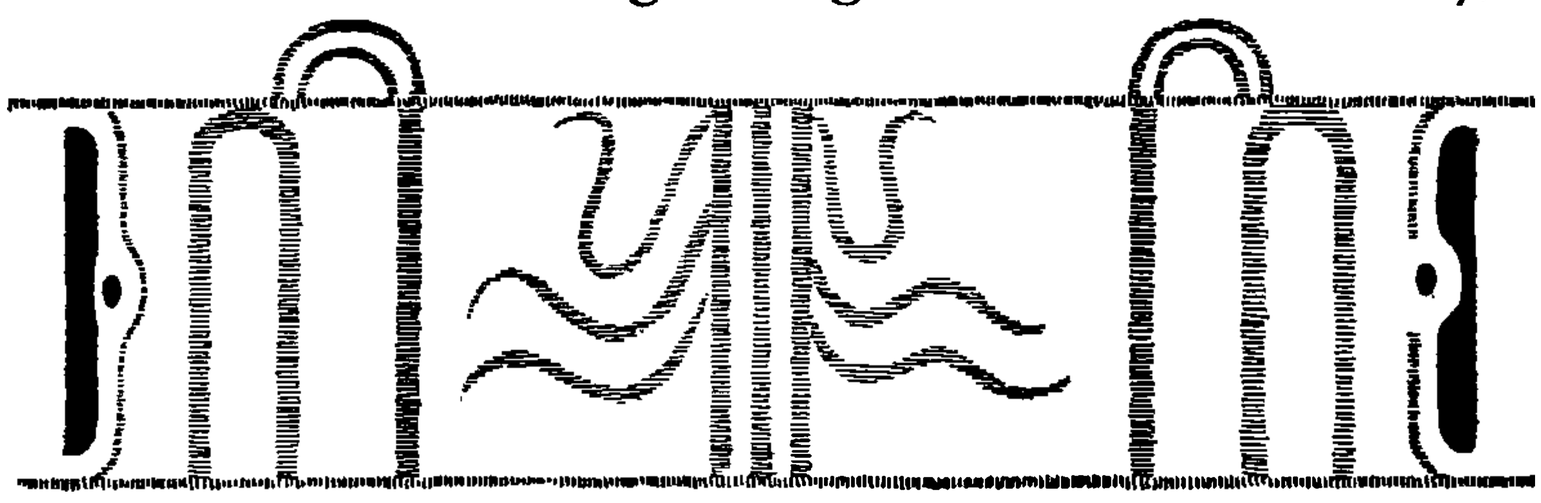


FIG. 296. DEGENERATE 'OCTOPUS AND PILLAR PATTERN' ON HUT-URN.

in Fig. 296, was found in the 'Well Chamber' deposit at Knossos,[3] and belongs to the proto-Geometrical period of Crete.

[1] See my observations, *The Shaft Graves and Bee-hive Tombs of Mycenae and their Interrelations* (Macmillan, 1929), p. 76 and n. 4; and cf. Forsdyke, *B.M. Cat. Prehistoric Pottery*, &c. (1925), p. 203, Fig. 286; and p. 206, A 1076. 1.

[2] Maiuri, *Ialisos*, p. 42, No. 56: Tomb xvii.

[3] See *P. of M.*, ii, Pt I, p. 128 seqq. and p. 129, Figs. 63, 64.

Smaller Vessels answering to L. M. II 'Palace Style'.

Smaller L. M. II vessels.

That on the Palace site itself there was a considerable dearth of smaller vessels contemporary with the fine palatial fabrics described above must largely be accounted for by the very affluence of its occupants, who doubtless made a large use of metal vessels. Apart from those in gold or silver, the general use of bronze for common utensils is well illustrated by the contents of the Tomb of the 'Plaster Hearth',[1] where an abundant deposit of bronze domestic utensils came to light, while, in contrast to this, not a single clay specimen was discovered. That most of the metal objects had been abstracted from the Palace ruins themselves by some eighty generations of treasure hunters has been already pointed out.

It will also be seen, as in the case of several of the large 'amphoras', many clay vessels from the palatial precincts bear traces of metal-work antecedents.

From one source and another, however, we have sufficient evidence to afford a fair picture of the smaller vessels contemporary with the 'Palace Style' 'amphoras'. A few select specimens are grouped in Fig. 297. Very well dated is the large globular flask (Fig. 297, *a* 1, *a* 2), 40 centimetres high, from the secondary interment of the inner sepulchral Chamber of the Temple-Tomb of Knossos,[2] of which both the side and top views are given. Of special interest here is the group of 'triple C's'—the most characteristic *cachet* of L. M. II—on the shoulders, while the central flowers on either side of the body greatly resemble those of the Stirrup Vase, Fig. 297, *b*. This latter vessel was itself found beside the fine Palace Style jar with papyrus reliefs on a landing of the main staircase of the 'Royal Villa'. Its reticulated design, with the beaded papyrus sprays, recalls some of the textile patterns of the 'Procession Fresco'.

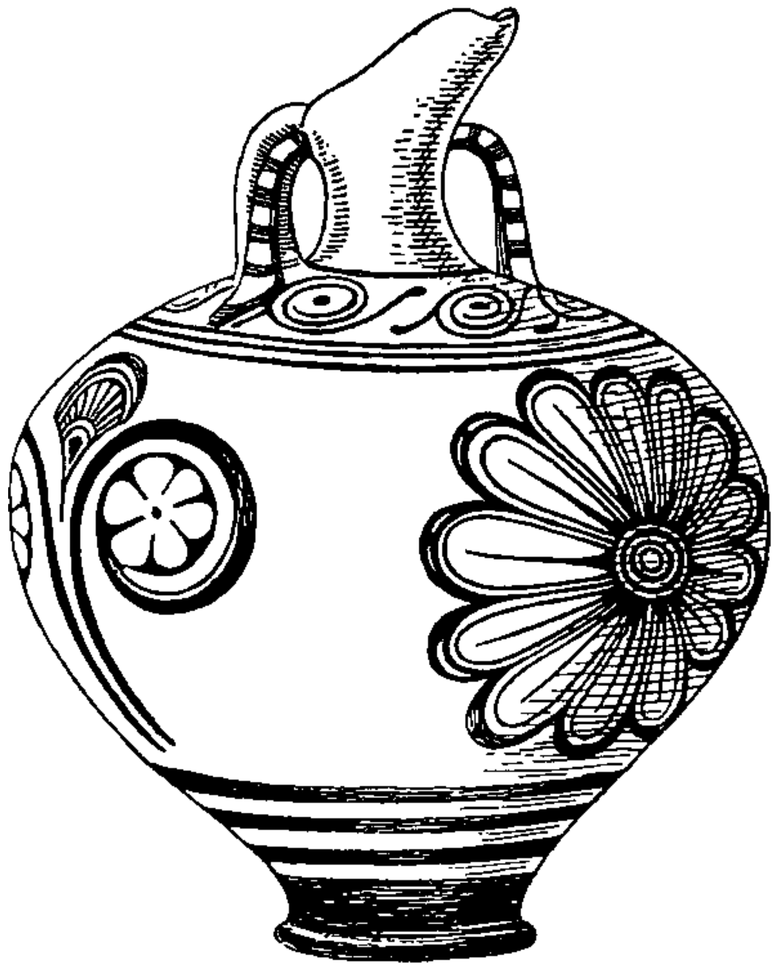
Well-dated, owing to its place of finding, was also the globular, high-spouted ewer, Fig. 297, *c*, with its three small handles, from the 'Tomb of the Double Axes'. Its large rosettes on a reserved field recall those of the Later Palace friezes, while the smaller flowers in the scrolls on its side recall those of Fig. 297, *a* and *b*. The little cup (Fig. 297, *d*) with floral designs in red, partly suggesting lilies, from the Mavro Spelio Cemetery [3] supplies a good example of the plant decoration of this ceramic class.

The stirrup vase of somewhat high proportions (Fig. 298), from the

[1] See *P. of M.*, ii, Pt. II, p. 634, Fig. 398.

[2] See below, § 117.

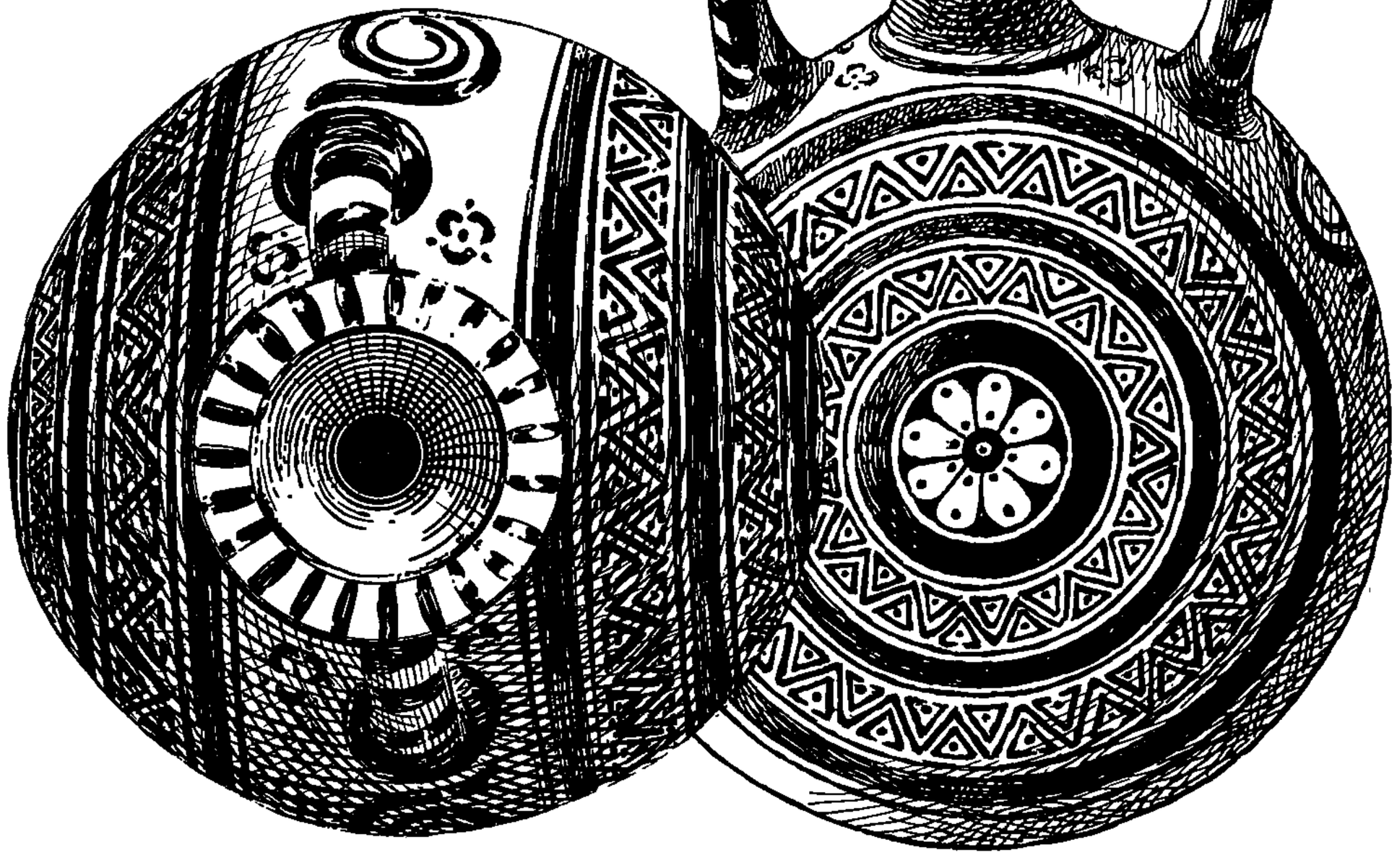
[3] E. J. Forsdyke, *The Mavro Spelio Cemetery at Knossos* (*B.S.A.*, xxviii, p. 263, Fig. 18, 'L. M. II Cup').



c

d

b 2



a 1 *a* 2

b 1

FIG. 297. SPECIMENS OF SMALLER VESSELS CONTEMPORARY WITH THE 'PALACE STYLE'. (L. M. II.)

South-West part of the site,[1] displays a cephalopod that may be regarded as coeval with the earlier class of 'amphoras' with this class of design. Though it has only four arms, they still bear traces of the suckers, and the covering over of the whole background with a kind of scale-work, the equivalent of the stippled work of the more palatial series, is also an early symptom. But of crucial value in determining the relative date is the still partly naturalistic form (*b*) of the 'three C's' motive within the coils. These approach the original 'Marine', L. M. I *b* type, as on the early Palace style 'amphora' (Fig. 261 above). This stirrup vase has every right to be ascribed to the L.M. II *a* phase. From an artistic point of view, however, it is not up to the palatial standard.

FIG. 293. *a*, STIRRUP VASE FROM SITE OF KNOSSOS: L. M. II *a*. *b*, THREE C PATTERN ON VASE.

L.M. II Pedestal Goblets.

One class, indeed, of smaller vessels belonging to the last palatial Age—the pedestal goblets, namely, with two band handles on either side of the rim—are well represented by fragmentary remains found by the South-West Angle of the Palace. They seem to have stood in connexion with a special sanctuary on that side. Other examples of these have come to light in relation to the later memorial cult of the 'Temple Tomb'.

But the history of these goblets, derived themselves from metal-work originals, has such a particular interest, and the amount of detailed evidence that they supply as to the decoration of these and other smaller vessels in the L. M. II style is so great, that they are best reserved for a special Supplement at the end of this Section.

Those connected with the presumed Sanctuary at the South-West Palace Angle have a special chronological value. The precipitation of this corner of the building down the slope by the seismic agency of which we see here the manifest traces, makes it in fact difficult to believe that the frequentation of this scene of cult could have survived the last catastophe

[1] Restored from fragments in the Ashmolean Museum.

of the Palace. We have here then ceramic materials that include the latest local fabrics but nothing later.

The overthrow of the great building itself affords an artificial boundary for the limits of the Second Late Minoan Period, marked in its higher ceramic manifestations by the 'Palace Style'. But—as is not less apparent of this sensational break than in the case where the history of the building was more or less continuous—it is still often difficult, when individual specimens are examined, to place them on one or the other side of a theoretical line of demarcation separating the L. M. II ceramic style from that of L. M. III.

No breach in cultural continuity after fall of Palace.

All the evidence, indeed, goes to show that, great as was the catastrophe that now befell the old residency of the Priest-kings of Knossos, there was as yet no real historic hiatus. The contents of the graves of the Zafer Papoura Cemetery that cover this critical epoch do not point to any real break in the local Arts and Crafts. The models supplied by the great Palace style of wall and vase painting, of metal-work and gem engraving, continued to be followed. A period of immobility in Art is succeeded by one of gradual decadence, but the course of Minoan civilization, whether still along the level or on a slightly downward incline, was as yet uninterrupted in the main.[1]

FIG. 299. FACETTED MACE OF SILICEOUS BRECCIA, FROM 'MACE-BEARER'S TOMB'.

In short the archaeological evidence lends little countenance to the idea of a violent irruption of foreign elements at this time, accompanied by the intrusion of Mainland types.

Clay 'Alabastron' from Mace-bearer's Tomb.

A compendious illustration of the immediately succeeding ceramic style, which may best be referred to the early part of L. M. III *a*, is supplied by a large 'alabastron' of painted clay from the 'Mace-bearer's Tomb' at Isopata [2] (Fig. 300). Chronologically even it may actually come within the limits of the Palace period. The deposit of the North-West angle of the Chamber from which this vessel was derived was marked by a lentoid gem with a design of a ram of good execution,[3] by a fine bronze spear-head [4] almost

[1] It is still possible here to repeat the conclusion imposed on me by the exploration of the Zafer Papoura Cemetery, twenty-five years since (see A. E., *Prehistoric Tombs of Knossos*, i, p. 133: *Archaeologia*, lix).

[2] A. E., *The Tomb of the Double Axes*, p. 14 seqq., p. 16, Fig. 23 *a*, *b*, and Pl II (*Archaeologia* lxv). A cruciform pattern appears on the base.

[3] *Ibid.*, p. 15, Fig. 20 *a*. [4] *Loc. cit.*, Fig. 21.

FIG. 309. CLAY 'ALABASTRON' FROM 'MACE-BEARER'S TOMB', KNOSSOS. L.M. II.

identical with one from the 'Chieftain's Grave' at Zafer Papoura—undoubtedly L.M. II—and by the exquisitely facetted mace (Fig. 299) of siliceous breccia, that may well have been the official badge of some functionary here interred.

The curious medley of painted designs on the upper part of this vessel itself, however, embodies a spirit the very opposite of that which marks the fine compositions and reserved fields of the true 'Palace Style' vases.

The disks round the shoulders are a reminiscence of an earlier tradition also illustrated by the clay 'alabastron' from Anibeh.[1] The closely packed figures of the lower zone are a confused jumble of miscellaneous ingredients. They include various vegetable forms, the *waz* lily scrolls, ending in birds' or fishes' tails, purely decorative sprays, the three C's, spring from 'marine' style, with a 'pallium'-like framework,[2] an ewer with handle and spout—a new motive—and a waterfowl even more degraded in style than those of the abnormal 'amphora' from the house North-West of the Palace.[3] We have here a whole repertory of decadent designs.

Partial Interconnexion of 'Palace Style' Fabrics with those of Mainland Greece.

Relationship of 'Palace Style' fabrics to those of Mainland.

It has been already shown that the 'Palace Style' of painted clay vessels, which in Crete represents the L. M. II stage, stands generally apart from what was afterwards the 'Mycenaean' World. The appearance of two characteristic examples of 'amphoras' in this grand style at Argos, very probably of local fabric, and imported specimens at Mycenae is a phenomenon that may well point to some more direct political dependence. Otherwise, as a general rule, the prevailing ceramic fabrics in Mainland Greece and throughout a large insular region, including Rhodes, for the most part represent the survival of what in Crete we know as the L. M. I *b* style that precedes and overlaps the palatial group. It sinks, indeed, to a somewhat decadent class of decorative designs to which the term of 'L. M. I *c*' is here given, and this in turn survives awhile the production of vases in the L. M. III *a* style at Knossos.

Sporadically, however, especially in connexion with smaller forms of vessels, the palatial fabrics seem to have been disseminated over a fairly wide non-Cretan area and in cases gave birth to local fabrics. To take one example out of many, the painted clay 'alabastron' from Tomb 14 of the Kolonakeion at Thebes,[4] which included L. M. I *b–c* elements, contained a squat three-handled 'alabastron' adorned—together with late conventional rockwork—with rosettes of a type that recurs on L. M. II ewers and pedestalled goblets found at Knossos in a 'palatial' relation.[5] In the next Age we shall see that the L. M. II of Knossos was the true parent of the 'diffused Mycenaean' class.

[1] P. 268, Fig. 198 *a*, *b*.

[2] So the parallel 4 C's motive becomes a more complicated figure.

[3] See above, p. 335, Fig. 278.

[4] Keramopoullos, Ἀρχ. Δελτ., iii, 1917, p. 152, Fig. 113, 1. The 'three-stalked' Ivy—a form rather characteristic of L. M. I *c*—appears on another clay 'alabastron' from this tomb (Fig. 113, A).

[5] Cp. especially the goblet, Fig 302, p. 362.

Supplement to § 99. The Pedestalled Goblets and the Evidences of Continued Cretan Influence in L. M. III.

As already observed, one particular type of vessel belonging to the palatial class has been here reserved for separate consideration. The handled bowls on raised bases or pedestals cannot, owing to the limited field for their painted designs, give an adequate idea of the 'Palace Style' in its fully developed aspect. Nevertheless, owing to the very extensive remains—often it is true of a fragmentary kind—of this series of goblets, they yet afford much supplementary information for details of the larger motives such as are seen on the 'Palace Style' jars and 'amphoras'.

It will be seen at the same time that these pedestalled goblets not only bear a direct relationship to a long Minoan series of metal cups of similar or parallel forms, but seem to have also largely shared with these a special connexion with certain religious functions.

A good side-light on this ritual aspect is afforded by the remains of the 'Camp-Stool' frescoes, to be described in the succeeding Section, which clearly formed part of the adornment of a 'Sanctuary Hall' near the North-West angle of the Palace. Amongst them a goblet of this metallic class, the blue ground of which may be taken to indicate its material as silver, appears grasped by two votaries in a manner suggestive of a 'Loving Cup' of sacramental usage.

In the case of this North-West Sanctury Chamber, the associated pottery found consisted almost exclusively of the monumental 'amphoras' and jars in the 'Palace Style', a series of which have been described in the preceding pages. Of the ritual chalices in precious metals, the existence of which was attested by the 'Camp Stool Frescoes', nothing had survived the continued grubbing of treasure hunters. It is possible, indeed, that they were habitually stored, when not in use, in some Palace Treasury like that immediately opposite in the West Court.

On the other hand, in the South-Western area—beyond all comparison the most fertile find-spot for the remains of the painted goblets with which we are here concerned—the conditions seem to have been different.

It looks, indeed, as if it had been a resort of votaries of a more ordinary and popular class than those who took part in the sacramental functions of the sanctuary at the other Palace angle, such as we see them depicted on the fresco group.

It is the South-West corner of the Palace site, in its latest extent, that

has proved to be such an abundant source of these stemmed bowls. It lies at a point where the hillside falls steeply away beyond it and had been totally ruined by the earthquake to which the final catastrophe of the building seems to have been due. Here, in the interval between the later Southern line of the Palace and the South House, together with the remains of fine 'Palace Style' jars and 'amphoras', such as those that marked the North-West Sanctuary, and amidst masses of carbonized wood, quantities of sherds occurred belonging to goblets of the class in question.

Only in a small number of cases could the vessels found be completely restored, but the evidence, though largely fragmentary, was of such a varied kind that it has been thought desirable to illustrate a series of specimen pieces in Fig. 301.

A few sherds still show the L. M. I *a* tradition [1] and several clay goblets, remains of which were here brought to light, went back to the L. M. I *b* stage, including part of the bowl of one presenting beneath its rim the adder mark in its purest form with dots as well as waves. Others bore a direct allusion to their ritual function in the shape of small Double Axes (Fig. 301, *a*) which reappear in company with conch shells on fragments of a painted clay 'rhyton' from the same deposit.

Combinations of the 'Sacral Ivy' with the papyrus wand or *waz* symbol and the '*waz* lily' also appear among fragments of goblets from this area belonging to the same L. M. I *b* phase (Fig. 301, *c–f*). The pendent rock and sea-tang seen in *b* also seem to belong to this category.

But the great bulk of the painted sherds, together with a certain number of stemmed goblets that it has been possible to restore, Fig. 302, belong to the same L. M. II stage as the palatial jars and 'amphoras' described in the last Section. They were, indeed, found in actual association with remains of several of the 'amphoras' illustrated above.

Of the restored specimens here given in Fig. 302, the cup *a* presents a fine rosette pattern recalling those that appear in the volutes of the Palace friezes—and, again, on a lesser scale in the spiral bands of 'amphoras'.[2] As a similar isolated ornament it occurs on a ewer from the 'Tomb of the Double Axes',[3] but its most exact parallels are the rosettes set on the shafts of the sacred weapons themselves on the fine painted jar from the North-West Sanctuary Hall.[4] No decorative design could be more palatial.

So, too, the six-armed octopus of Fig. 302, *b*, might have been taken from a Palace 'amphora'.

[1] E.g. Fig. 301 *q*.

[2] See above, p. 320 seqq.

[3] *Archaeologia*, lxv (1910), p. 47, Fig. 62.

[4] See above, p. 342 seqq., and Fig. 285.

FIG. 301. FRAGMENTS OF PEDESTALLED GOBLETS FROM SOUTH-WESTERN PALACE ANGLE, PRESUMED SANCTUARY BORDER. *a–e*, L. M. I *b*; *f–x*, L. M. II.

Among the L. M. II fragments illustrated in Fig. 301, *l* presents the characteristic 'three-C' pattern in a prominent position. *m*, *n*, *o* supply good illustrations of another very characteristic decorative product of this Period,

FIG. 302. RESTORED SPECIMENS OF STEMMED GOBLETS. *a–c*, S.W. PALACE ANGLE, KNOSSOS; *d*, FROM DRAIN BELOW GREAT 'EAST HALL'.

resembling in its final shape a form of A (see fragment *o*), but originating, as may be seen in *m*, from a kind of budding spray.

As noted below, a special interest attaches to the decorative lily type with cross-bars to its anthers, Fig. 301, *r*, found in the same deposit—chronologically we may conclude not later than the date of the final catastrophe of the Palace—from its practical identity with certain similar motives on the Mainland class of goblets known as 'Ephyraean'.

Antecedents of Pedestalled Clay Goblets.

Pedestalled goblets without handles go back to the very beginnings of Minoan ceramic Art, and are, in fact, characteristic of the preceding Late Neolithic stage. But an interesting specimen from Vasilikì, of E. M. II

FIG. 303. GOLD ONE-HANDLED GOBLETS WITH PEDESTALS FROM SHAFT GRAVES, MYCENAE.

date, belongs to a group presenting undoubted examples of the imitation of metal-work originals and including an ewer that reproduces even the rivet-heads of the bronze plates of which it was composed.[1]

It was not, however, till the First Late Minoan stage that clay goblets supplying the antecedent stage to the true 'stemmed' type make their appearance with handles on either side of the bowl. The band type of handle and other characteristic features of these show that in this case again we must look for metal-work originals.

The old '*kantharos*' type of silver bowl, introduced at the beginning of the Middle Minoan Age through Troadic commercial relations and closely imitated in clay both in Crete and by the 'Minyan' potters on the Mainland side had, indeed, been characterized by a pair of 'high swung' handles, linking the keeled contour of the body with the rim. A gold cup without a stand from the Fourth Shaft Grave at Mycenae[2] of the same characteristic contour fits on to this class.

In contradistinction to this latter example the pedestalled goblets in precious metals found in the royal interments there regularly show a single handle (Fig. 303, *a–c*). This is also the case with what may be called the 'transitional' type of painted clay goblet in which the lower part, though

[1] *P. of M.*, ii, Pt. II, p. 635, Fig. 399.

[2] Schliemann, *Mycenae*, p. 242, Fig. 241.

narrowing as it approaches the base, is far from forming a solid stem. An early specimen (*a*) from Palaikastro is given at the head of the comparative group illustrated in Fig. 304,[1] where the vivid colouring and white embellishment show that it belongs to the mature L. M. I *a* phase. In this case the clay imitation of a rivet-head at the junction of the handle and rim

FIG. 304. ANTECEDENT FORMS OF CLAY GOBLETS, SHOWING SINGLE HANDLES. *a*, PALAIKASTRO (L. M. I *a*); *b*, VAPHEIO TOMB (L. M. I *b*); *c*, PHAESTOS (L. M. I *b*).

clearly points to a metal prototype. A series of L. M. I *b* goblets like those with the 'adder mark' round their rims, Fig. 304, *c*, have also only one handle, there terminating in the adder's head. The Vapheio specimen (*b*) of the same approximate date, belongs to this one-handled class.

But experience seems to have shown that in the case of these large pedestalled bowls, whether of metal or clay, a second handle was both a convenience to its user and of better security to the fabric of the vessel. In the L. M. II Period, if we may judge from the bronze specimens, Fig. 305, *b*, found in the 'Tomb of the Tripod Hearths' at Zafer Papoura, and another of silver from the 'Royal Tomb' at Isopata, as restored in Fig. 305, *a*,[2] the two-handled form was coming into vogue. The pedestalled gold cup

[1] As restored in *Palaikastro Excavations*: Suppl. Paper II, Pl. XVII *b*. See R. C. Bosanquet, p. 34. This vessel had a hole in its base and may therefore have been made use of as a flower-pot of the class described above (cf. *P. of M.*, iii, pp. 277–9).

[2] In my *Preh. Tombs of Knossos*, p. 155, Fig. 139, it is restored, with less probability, as having only one handle.

found with the large signet in the deposit near the Grave Circle at Mycenae[1] may also be cited for comparison, though the handles in this case terminate above in zoomorphic heads. The stemmed goblet held in the hands of a votary in the 'Camp Stool Fresco' (Fig. 305, *c*) described in the succeeding Section,[2] also belongs to this two-handled class. From the blue ground

FIG. 305. METAL TYPES OF TWO-HANDLED PEDESTAL GOBLETS FROM KNOSSOS. *a*, SILVER, 'ROYAL TOMB', ISOPATA; *b*, BRONZE, TOMB OF TRIPOD HEARTH, KNOSSOS; *c*, 'CAMP-STOOL FRESCO' (PRESUMED TO BE SILVER)

with repeated black curves it is suggested that its material was of silver with curved flutings.

These later metal types herald a whole series of painted clay goblets that stand in relation to the last 'Palace Style' of Knossos and of which the presumed Sanctuary of the South-Western Palace Angle has supplied such a considerable amount of evidence. To the completed specimens from that area there has been added in Fig. 302, *d*, one of somewhat high proportions, restored from the remaining portion of its lower half, which has a special chronological value. It was found in the stone drain that had served the light-well of the great East Hall of the Palace, and the use of which can therefore be dated to the latest epoch of the building. It may thus be taken to represent the final phase of the L. M. II style.

The association of this vessel with the 'East Hall' may not itself be without some ritual significance since we have convincing evidence that this had also served as a sanctuary.[3] In the same way, as will be shown in the concluding Section of this Volume, the newly discovered 'Temple Tomb' has preserved a record of the employment of similar goblets associated with

[1] Schuchhardt, *Schliemann's Excavations*, p. 276, Fig. 280.

[2] See Part II, pp. 381, 382.

[3] See *P. of M.*, iii, p. 525, &c.

the interment of some last scion, we may suppose, of the House of Minos and of a memorial cult of which it was the scene.

A photographic group of these reproduced in Fig. 306 includes some bowls (*b*, *c*, *d*). 'Kraters' of the kind that seem rather to have belonged to a more advanced L. M. III class also occurred in these deposits, nor is it

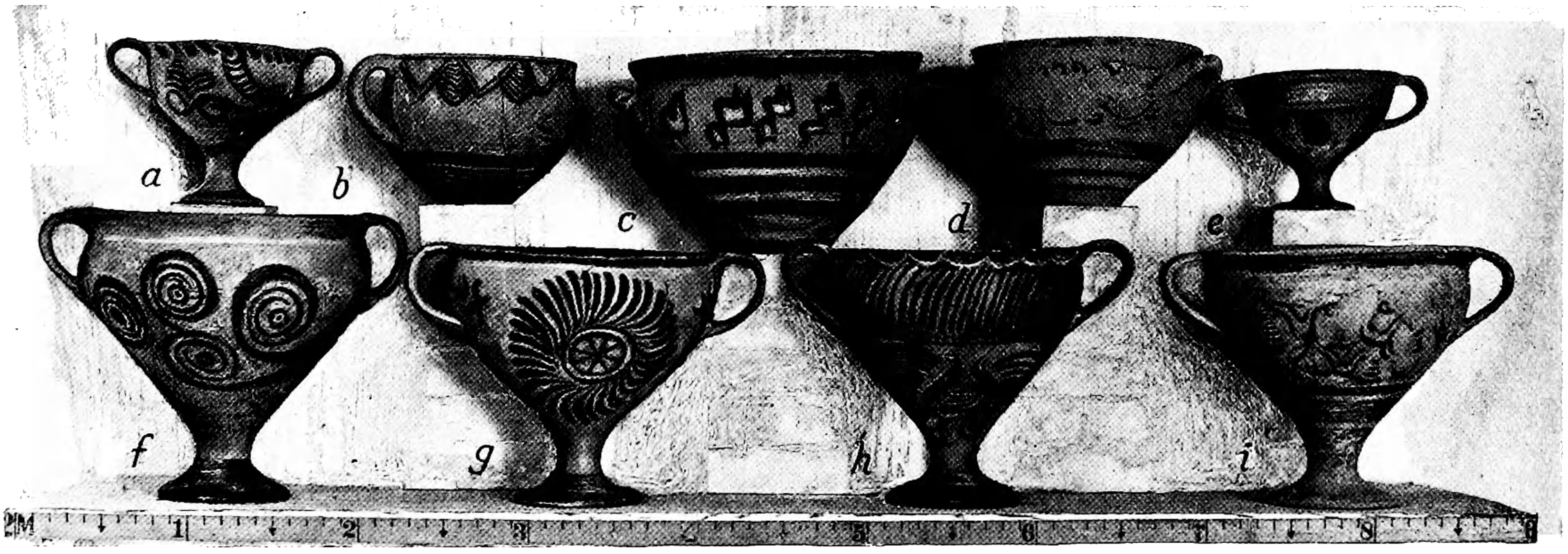


FIG. 306. GROUP OF PEDESTAL GOBLETS AND BOWLS FOUND IN CONNEXION WITH LATER MEMORIAL CULT, TEMPLE TOMB, KNOSSOS.

always easy to say to which side of the border-line some of the pedestal goblets here shown should be referred. What is specially interesting to observe is that all these specimens—some of which certainly belong to L. M. III *a*—have hollow pedestals, still recalling their metal prototypes like the one-handled goblets, Fig. 303 above. One stemmed cup presents a single axe of the Syro-Egyptian form referred to below.[1]

Among the fragments of pedestal goblets from the South-West Palace Angle given in Fig. 301 above, the lily spray, *r*, with barred stamens, which is to be regarded as one of the latest of the series, has a special interest. It may be set down as an intrusive specimen belonging to a decorative class of designs, the later stages in the evolution of which lie outside Knossos, whence it originally sprang. Outside Crete the range of this barred decoration, in the form in which it is now seen, extends over a wide Mainland, Aegean, and East Mediterranean area from Thebes and Corinthia to Rhodes and Cyprus. It is in fact an outgrowth of a late stage of the inflorescent date-palm motive very characteristic of the L. M. I *b* and *c* style as developed in those regions. Specimens of this in its

[1] See Part II, p. 414 seqq. and cf. p. 348 seqq. above.

ornamentalized ceramic stage from the Boeotian Thebes and Ialysos in Rhodes are given in Fig. 307, *a*, *b*, and it seems to be an inevitable con-

FIG. 307. BARRED SPRAYS AS DERIVED FROM PALM FRUTESCENCE. *a*, THEBES, BOEOTIA; *b*, IALYSOS; *c*, ON CUP FRAGMENTS, KNOSSOS; *d*, MARONI, CYPRUS; *e*, 'EPHYRAEAN'.

clusion that the cross dashes sprung from the conventionalized sprays there seen. To understand the origins of these we have to go back to the Knossian Palace of a much earlier date, and to M. M. II *b* and M. M. III *a* polychromy.[1]

The stage of evolution represented by the Knossian fragment,

[1] See *P. of M.*, i, p. 254, Fig. 190, *a*, *b*, and p. 594, Fig. 436 c: and for the later evolution, *P. of M.*, ii, Pt. II, p. 496, Comparative Table, Fig. 301. The suggestion for the 'bars' is first given by slight border excrescenses as shown in Fig. 308, *a*, below.

Fig. 307, *c*—where the date-palm has shrunk into a conventionalized lily—in fact answers to a widely diffused type answering to the extra-Cretan survival of the First Late Minoan style, here referred to as 'L. M. I *c*'. The frag-

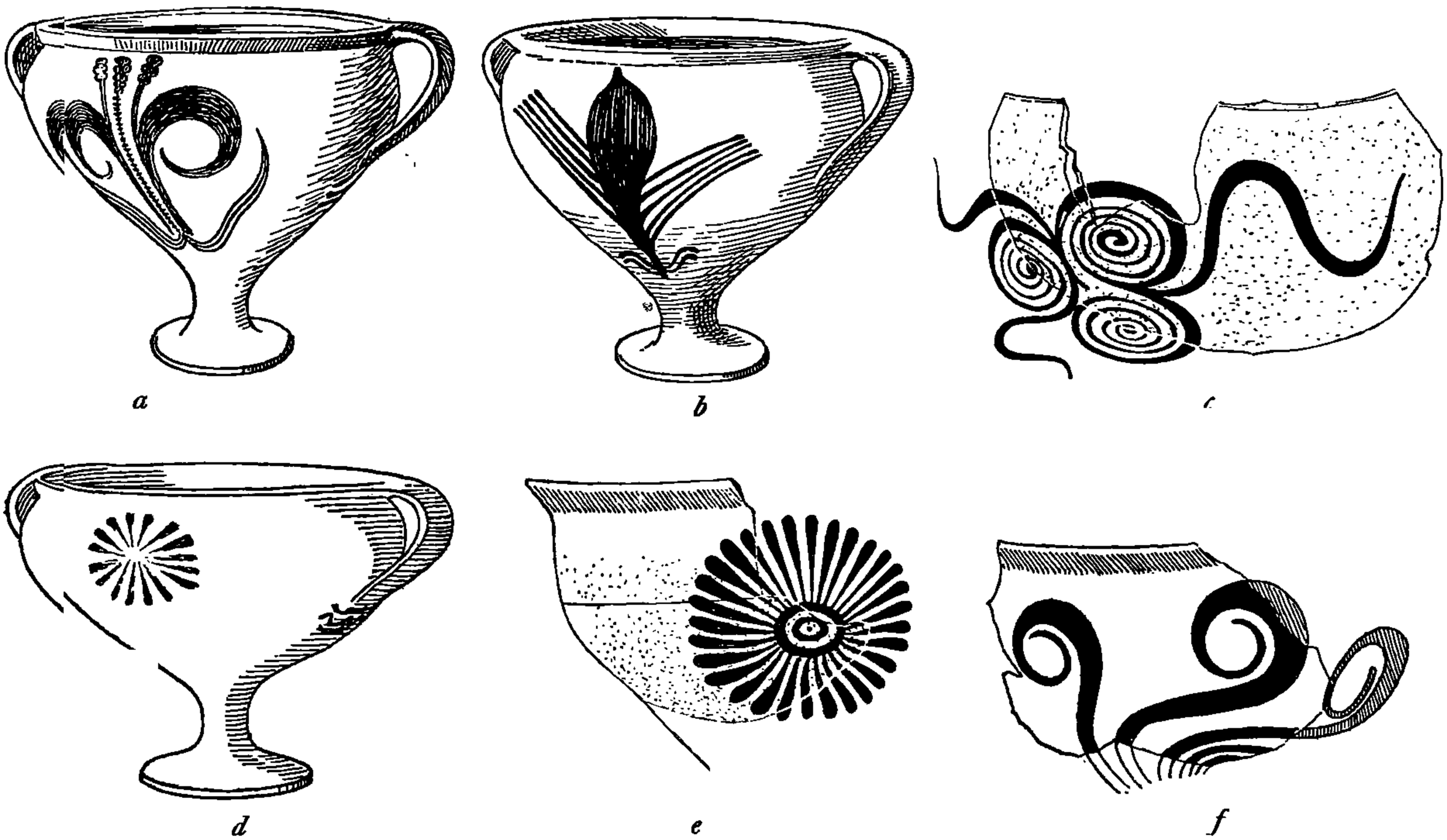


FIG. 308. STEMMED TWO-HANDLED GOBLETS OF 'L. M. I *c*' FROM KORAKOU, NEAR CORINTH, (CALLED 'EPHYRAEAN').

ment of design here seen is well completed, indeed, by the stemmed goblet from Maroni in Cyprus, Fig. 307, *d*.[1] An identical barred lily type occurs on goblets or their parts from Tiryns[2] and Mycenae,[3] and the Deiras site at Argos, and appears again on the contemporary group of vessels from Korakou, near Corinth,[4] in company with other characteristic L. M. I *c*

[1] *B. of M.*, *Cat. Greek and Etruscan Vases*, vol. i, Pt. II, by H. B. Walters, c. 617, p. 119, and Pl. III. See, too, Gierstad, *Studies in Prehistoric Cyprus*, p. 212. A fragment of an *oenochoê* with a similar 'barred lily' decoration (4 stamens) is also given, *op. cit.*, p. 112, c. 578, from excavations at Hala Sultan Tekké, near Larnaka.

[2] In the Museum at Nauplia.

[3] E.g. F. u. L., *Myk. Vasen*, Pl. XXVII, 221 (apparently part of goblet), and 215.

[4] These are excellently published by Dr. Carl W. Blegen in *Korakou: A Prehistoric Settlement near Corinth* (1921). Dr. Blegen, who regards the locality as approximately corresponding with the Homeric Ephyra, christened this local ware 'for convenience' as Ephyraean, and, from an examination of

forms, Fig. 308, including further decadent excerpts from the date-palm stock (*b*), triple Argonaut coils (*c*), and asterisks (*d*, *e*) common to the Knossian series, and eventually derived from the rosette friezes of Palace walls.

It may be observed that the L.M. I *b* vessels and their L.M. I *c* derivatives on the one side and the L.M. II–III on the other show individual preferences and aversions in the choice of subjects. Thus the L.M. I *b* series repeats the decadent palm-tree motive of old tradition, with its barred petals and stamens of the lily or the crocus, which in the L.M. II branch centring on Knossos prefers the papyrus of Nilotic tradition. The first series again repeats the argonaut, reduced to mere triple coils, while the other is still dominated by the octopus. On the Mainland group, as we have seen, the Double Axe itself survives as a bivalve shell while the palatial rosette preserves its form on the Knossian side and reticulated patterns occur that might have been taken from the robes of the processional figures of the Palace fresco.

Compared with high cups on slender pedestals already seen among metal specimens, like that from the once stately Tomb of the Tripod Hearth at Knossos, Fig. 306, *b*, both the parallel sets of L. M. II and L. M. I *c* have still a relatively squat appearance. The stem is still largely open, thus preserving the tradition of its original form.

As a general rule it seems best to assign the full evolution of the two-handled goblet of somewhat taller build on a mostly solid stem to the maturer phase, included in L. M. III *a* ('Late Mycenaean A'). One from the Diktaean Cave[1] with a solid stem of this kind, here first illustrated in Fig. 309, *a*, may be best grouped with the later class, in spite of the reminiscences suggested by its spiral decoration. A more typical example, with decadent papyrus motives, from an early 'Reoccupation' deposit in the East Quarter of the Palace, is given in Fig. 309, *b*. Good L. M. III *b*

the material, infers that it was distributed to other sites including, besides, Tiryns, Mycenae, and the Argive Heraeum, the Melian site of Phylakopi. But it still can only be regarded as a local variety of a widespread class, the form and ornaments of which go back to L. M. I *b*. In *The Pre-Mycenaean Pottery of the Mainland*, by A. J. B. Wace and C. W. Blegen (*B. S. A.*, xxii: 1916–18, pp. 175 seqq.), these goblets, separated from their context, are classed as 'Minyan Ware Group IV'—'Ephyraean Ware'.

What makes this terminology the more unacceptable is that the pottery is, admittedly, not of 'Minyan' make, but 'wheel-made and of very fine fabric', and that it is without the characteristic 'ringed stem'. The 'Minyan' relationship here claimed is indeed qualified by the admission that the distinguishing feature of these fabrics is their decoration 'with graceful floral and marine patterns—iris, crocus, nautilus, &c., imitated from Cretan ware of the first Late Minoan period' (p. 182).

[1] In the Candia Museum.

specimens were found in a Chamber Tomb at Milato where the raised and somewhat angular loops of the handles seem to reflect a new reaction of metal forms.

FIG. 309. SOLID STEMMED GOBLETS. *a*, DIKTAEAN CAVE; *b*, KNOSSOS; *c*, KALYMNOS; *d*, KURION, CYPRUS; *e*, CRETAN FABRIC: B.M.

It is to this stage, corresponding with that of an associated group of 'kraters', that goblet types belong, which combine the pillars of architectonic derivation with elements drawn from the head and arms of the octopus. An offshoot of this from Kalymnos [1] is given in Fig. 309, *c*. On other high-stemmed goblets the cephalopod itself, so dear to Knossian tradition, makes its reappearance over a large area. Fragments of such were found amongst 'Reoccupation' remains at Knossos itself, and a Cypriote specimen from Kurion is given in Fig. 309, *d*,[2] which is interesting as having been found in

[1] *B.M. Cat.*, vol. i, Pt. I, *Preh. Aegean Vases* (E. J. Forsdyke), p. 190, A 1008.

[2] *B.M. Excavations*, p. 72, Fig. 124, 28; *Cat. Vases*, vol. i, Pt. II, *C*.

Tomb 28 with a scarab attributed to Rameses II's time, and in that case not earlier than 1300 B.C. To the same date belong examples with an advanced stage of the 'cork-screw' *murex* motive. *e* gives a sample of a still later class on which animal forms are admitted.[1]

This higher, solid-stemmed form now becomes general among goblets in the diffused 'Mycenaean Style' from Crete to Northern Greece on the one side and Rhodes and the Aegean Islands and as far East as Cyprus on the other. A transitional, somewhat lower specimen from Aliki in Attica shows papyrus sprays in an evolutional stage a little later than that of Tell-el-Amarna, and indicates that the high-stemmed form may have attained maturity in the latter half of the Fourteenth Century B.C.

The Minoan Cultural Area as temporarily split into Two Spheres, 'L. M. II and L. M. I *c*'.

From what has been said above it will be seen that these stemmed goblets supply a very useful illustration of how the once unitary development of Minoan Art was split up, for the time at least, into Knossian and extra-Cretan spheres. At Knossos itself and the region immediately dominated by it—which seems, indeed, from the evidence of the Argos 'amphoras' to have partly extended oversea—some ephemeral exaltation of power on the part of its rulers seems to have found expression in the brilliant 'Palace Style' of L. M. II. On the other hand, the older L. M. I *b* tradition is seen to have persisted under the progressively decadent form of 'L. M. I *c*' throughout a large part of the Morea, in the Boeotian Thebes, in Rhodes, and other insular areas. We have the evidence in the case before us of two parallel classes of goblets with their special repertories of ceramic designs, which, however, at times—as was natural from their common origin—show certain common motives.

Leading Part played by Crete in New Unifying Process.

But, as we also learn, this apartness of the two ceramic spheres was only of temporary duration. The popular idea of the fall of the Knossian Palace seems to be that it was due to some hostile irruption from the Mainland side, and the explanation of the new fusing process that now seems to have set in would naturally be based on this view. But the ceramic data before us—supported by some of the new and unsuspected details above noted—lend no countenance to such a conclusion.

Rather, it appears that the conservative Mainland traditions of 'L. M. I *c*',

[1] See on this design, pp. 373, 374, below.

such as are illustrated for instance by the so-called 'Ephyraean' group, finally yield to the influences of the Knossian ceramic centre that in many ways survived the fall of the Great Palace itself. The taller metallic form of goblet ousts the traditional squat type. In one shape or another the papyrus and the octopod once more attain a vogue. Among larger vessels the *krater*, descended from bronze prototypes adorned with the finest 'marine style' of Knossos, ranges from Mainland Greece to Cyprus, carrying with it chariot scenes on which Sphinxes are also depicted, and bull-grappling episodes originally at home on the painted sarcophagi of Crete. The *krater* from the Cypriote Salamis (Fig. 310)[1] tells a particularly significant tale, since it reproduces in a but slightly decadent form the 'three C' ornament, characteristic, as has been demonstrated above,[2] of the mature 'Palace Style' of Knossos.

FIG. 310. *KRATER* FROM ENKOMI (WITH 3 C's).

It has been already shown that the same ornament, reduced to two C's but unmistakable in their formation, intrudes itself on the 'tankard' from the 'Diktaean Cave' that supplies one of the best examples of what has been above termed 'the Late Revival' of decorative Art.[3]

A further example of this from the 'Cymbal Player's Tomb' at Mulianà[4] in East Crete is here given in Fig. 311. It is a development of the design on the upper surface of a globular Stirrup Vase, based like that of the tankard on the favourite cuttlefish motive of L. M. II, but spun out in a continuous ornamental band which includes two argonaut shells in the outer coils.

The evidence in fact implies that Crete may claim a preponderant share in this decorative movement, which forms such a leading feature of the mature L. M. III *a* ceramic style at Ialysos equally with Mycenae.[5] More than this, it would even seem to have been the main source of the wave

[1] *B.M. Excavations in Cyprus*, p. 18, Fig. 74, 1148, Tomb 83; *Catalogue*, *C*.
[2] See above, pp. 314, 315 and Fig. 250.
[3] See above, p. 313, Fig. 249; p. 314, Fig. 250, *j*.
[4] Εφ. Ἀρχ. (1904) Pl. i, and pp. 38–49.
[5] See Pt. II, p. 747 seqq.

of influence that at this time cuts short the 'L. M. I *c*' survival on the Mainland side.

As the Zafer Papoura interments show, whatever local break was

FIG. 311. DECORATIVE SCROLLS ON STIRRUP VASE FROM TOMB B, MULIANÀ. 'CYMBAL-PLAYER'S TOMB'.

caused by the overthrow of the Great Palace, there was no real interruption in the local culture, and indeed the Residence of its Priest-kings may simply have been shifted to another site. It will be seen that many current ideas regarding the beginnings of the succeeding L. M. III *a* phase —to use the Cretan terminology—must be radically revised. The invasion of Cretan ceramic forms at this time manifest is indeed paralleled by the even more surprising phenomenon, illustrated below, that this phase is marked at the Boeotian Thebes, at Tiryns and Mycenae itself by the appearance of a linear script in the main identical with that of the clay documents buried by the last catastrophe on the old Palace site of Knossos.

The comparatively tall and solid-stemmed type of goblet survives into the succeeding L.M. III *b* phase in which not only animals such as wild goats and horses are represented, but figures of hunters and riders. The cup (Fig. 309, *e*),[1] no doubt rightly attributed to Crete, depicts two agrimis confronted before a conventional tree. A remarkable stylistic feature here visible—better shown in the excerpt, Fig. 312, *a*—brings us to a curiosity of delineation with regard to animals' heads not hitherto noted but which is clearly a characteristic of the last phase of Late Minoan Art. This

[1] In the British Museum.

is the double rendering of the eyes adapted to a head in profile. What at first sight might be regarded as a similar attempt to combine the profile

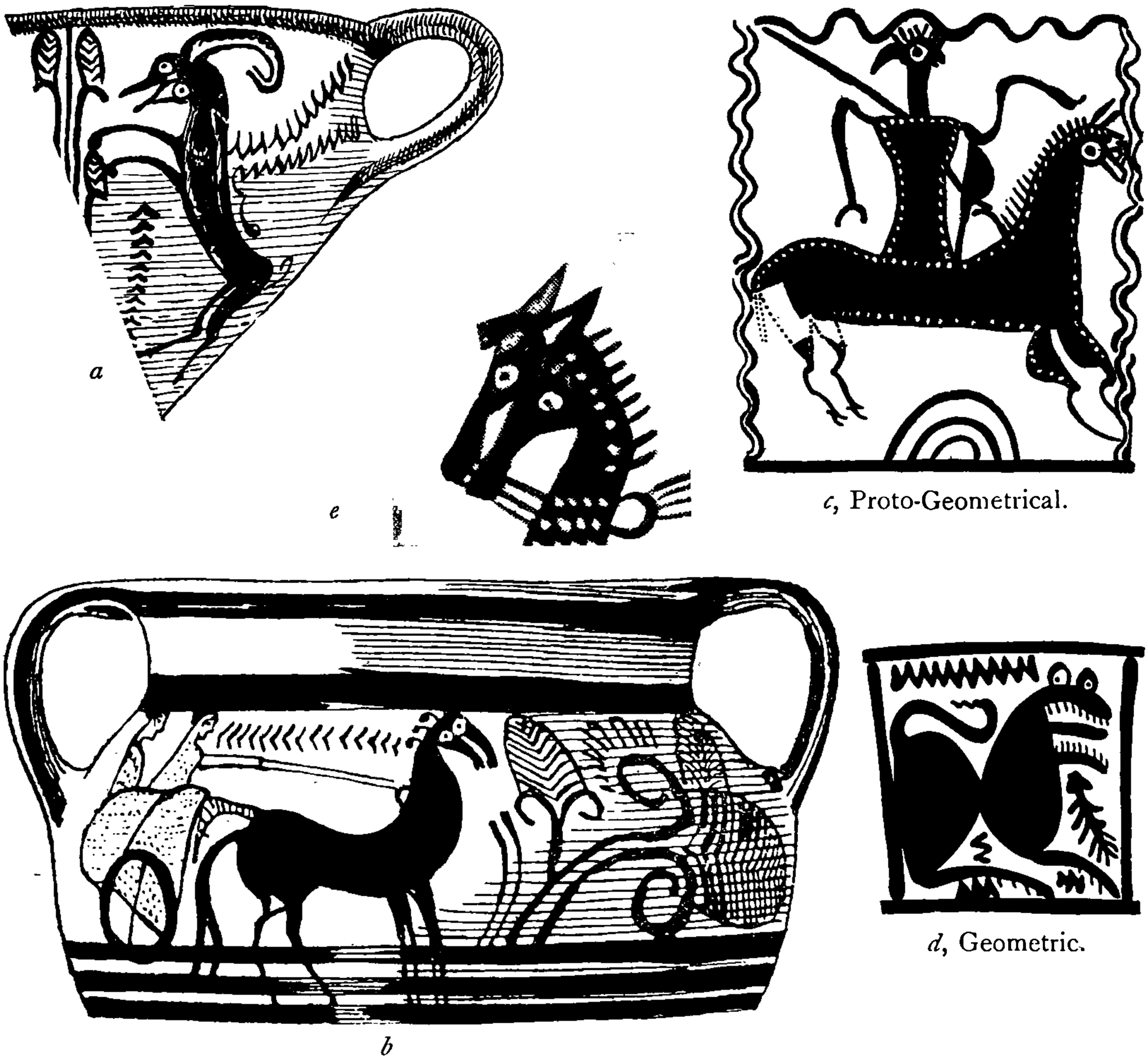


FIG. 312. *a*, PART OF CRETAN STEMMED GOBLET WITH GOAT IN A PROFILE SHOWING BOTH EYES; *b*, SECTION OF 'AMPHORA' FROM ENKOMI, CYPRUS; *c*, DESIGN ON PROTO-GEOMETRICAL *KRATER*, TOMB A, MULIANÀ, EAST CRETE; *d*, PROFILE VIEW OF LION SHOWING BOTH EYES: GEOMETRIC: BRITISH MUSEUM; *e*, DETAIL OF ANOTHER ENKOMI 'AMPHORA'.

rendering with two eyes recurs on some more or less contemporary Chariot types on Cypriote *kraters* (Figs. 312 *b*, *c*), but on close examination it will be seen that in every case the nose of the second horse is given.

A good example of this is afforded by the section of a 'amphora' design from Enkomi reproduced in Fig. 312, *b*,[1] which owes a special

[1] *B.M. Excavations in Cyprus*, p. 45, Fig. 71, No. 929; *B.M. Cat.*, *C.*

pertinence to the fact that the papyrus sprays introduced into the field belong to the Cretan cycle. Such sketchy delineations of overlapping horses' heads might be easily misunderstood and have suggested to the simple artist who painted the goblet the idea of giving his goats, though seen in profile, their full complement of eyes. (Fig. 312, *a*.)

a *b*

FIG. 313, *a*, *b*. SYRO-HITTITE CYLINDERS SHOWING DOUBLE PROFILES.

This endeavour to reconcile the profile view with a facing effect is analogous to the process by which the winged figures of Cypriote or closely related Syro-Hittite cylinders are given double profiles of man, Griffin, or bull, or appear with two separate heads.[1] In another form we see it in the double-headed eagles of Hittite intaglios and reliefs, taken over by the medieval Empire. It seems in fact to be an Old Anatolian tradition. (See Fig. 313.)

As a Cretan feature the primitive convention here seen does not stand alone. It recurs on a late, bell-shaped *krater* with horizontal handles from Tomb A at Mulianà (Fig. 312, *c*), where for the first time we see a horseman with the peak behind the head characteristic of the later, Geometrical series. The cremated bones found in it moreover supplied the earliest authentic instance of this practice in the Island. As is shown by seal-stones of that epoch, the art of riding was not yet understood by the artist, who joined the upper part of the figure to the back of the horse without any indication of legs. Like the Spanish cavaliers to the men of Montezuma, horse and rider were one. The horseman here holds a spear and a small

[1] Fig. 313, *a*, L. Delaporte, *Cat. des Cylindres Orientaux de la Bibl. Nat.* 478; (*b*) Ward, *Seal Cylinders of Western Asia*, No. 1000, p. 316.

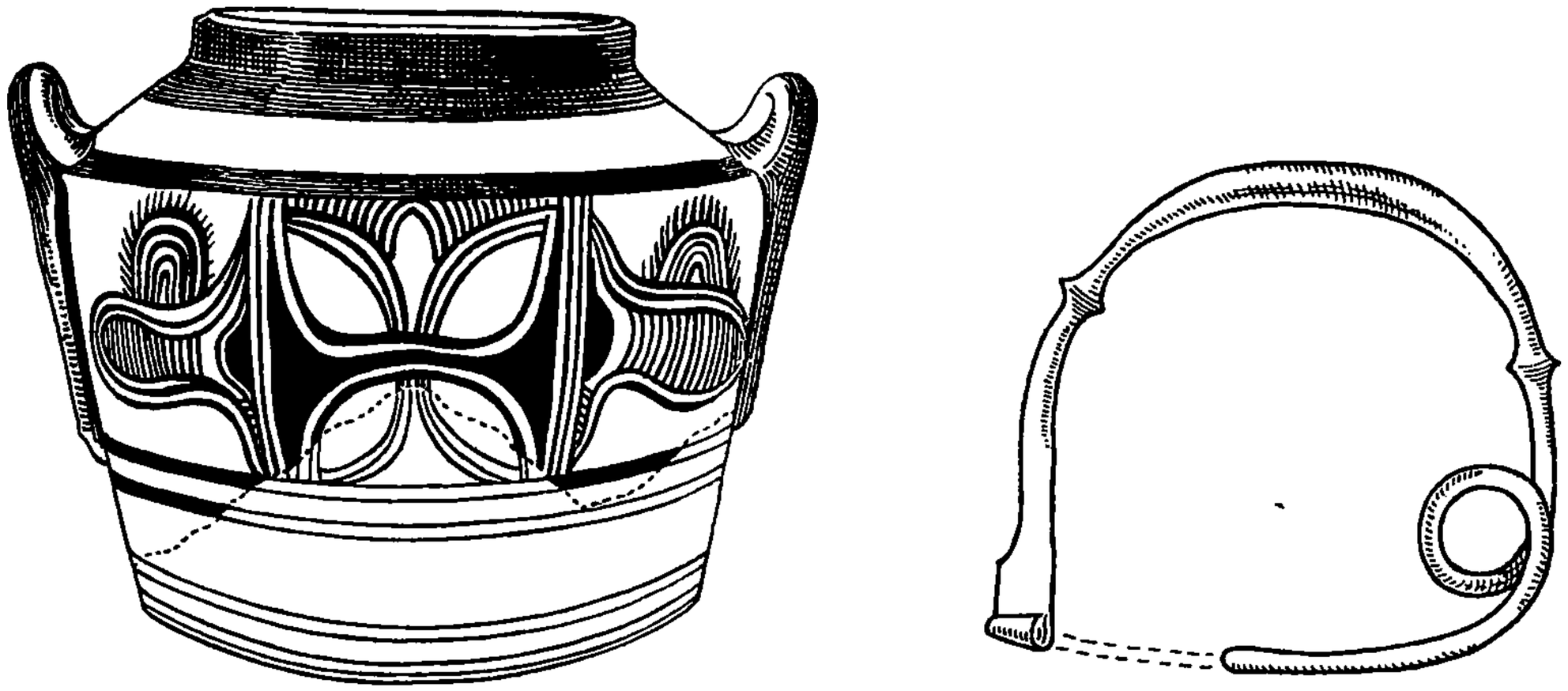
round shield seen in profile. This vase, the other side of which with a hunting scene is shown in Fig. 314 *a* has perhaps a higher ethnic interest than any early work of the kind in the Greek world. It already reflects the arrival on the shores of Crete of a foreign race of riding men who cremated their dead. It is still to be noted, however, that the bell-shaped *krater* itself was of a traditional Minoan form, and its decorative elements are of a degraded Minoan class. This was still better shown by an associated pot where the central feature is the Double Axe (Fig. 314 *b*). The high-stilted *fibula*, *c*, found with it, is chronologically quite in keeping.

FIG. 314 *a*. BELL-SHAPED *KRATER*: TOMB A, MULIANÀ.

The 'Late Revival' in decorative design, above referred to, was both partial and transient. A rapid cultural decay now sets in throughout the Aegean World in the epoch corresponding with the general adoption of iron in place of bronze for implements and weapons. To this Age—represented on the site of Knossos by the votive vessels and figurines found in the Spring Chamber[1]—the name 'sub-Minoan' or 'proto-Geometric' may be applied, according as we regard it from its antecedent or succeeding phase. Into this epoch the stemmed goblets, with other purely Minoan forms, still survive (Fig. 309, *e*), including the bell *krater* and the stirrup vase—though in an attenuated and somewhat clumsy shape and with poor decoration. A specimen from a tomb at Karakovilia[2] in East Crete—together with other typical objects from the same source, contemporary with the remains from the 'Spring-Chamber' at Knossos—is here reproduced in Fig. 315.

[1] Xanthudides, Ἐφ. Ἀρχ., 1904, Pl. III, and cf. p. 23 seqq.

[2] Reproduced from *P. of M.*, ii, Pt. I, p. 137, Fig. 70. For *Karakovilia*, cf. E. H. Hall, *Excavations in Eastern Crete, Vrokastro*, p. 150, Fig. 89, &c.



b *c*

FIG. 314 *b*. TWO-HANDLED POT FOUND WITH *KRATER* (FIG. 314, *a*) IN TOMB A, MULIANÀ, EAST CRETE. FIG. 312, *c*, REPRESENTS THE DESIGN ON THE OTHER SIDE OF THE VESSEL, FIG. 314 *a* : *c*, BRONZE FIBULA FROM SAME DEPOSIT.

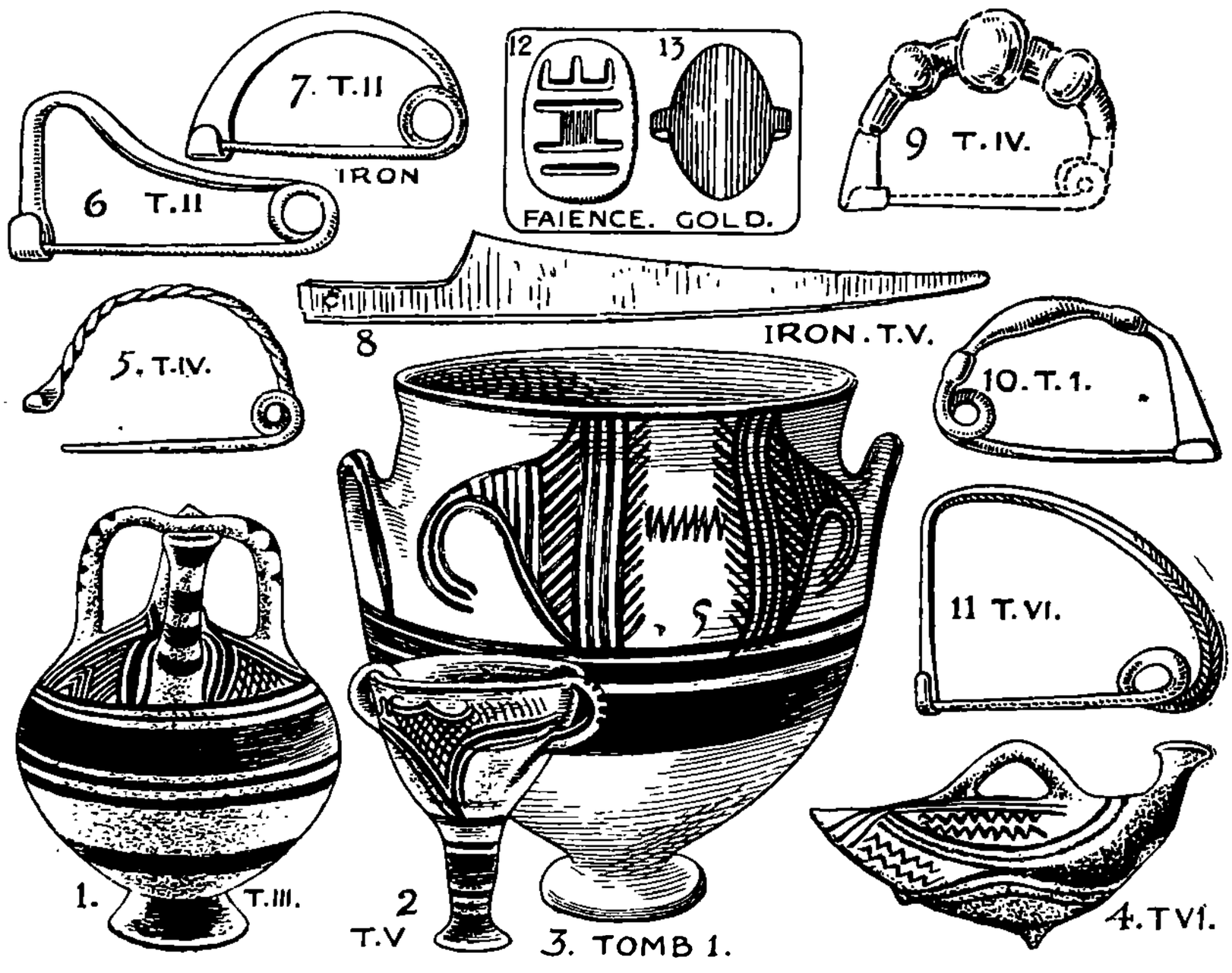


FIG. 315. PROTO-GEOMETRICAL TYPES FROM KARAKOVILIA TOMB, INCLUDING CERAMIC TYPES PARALLEL WITH THOSE OF 'SPRING-CHAMBER' AT KNOSSOS

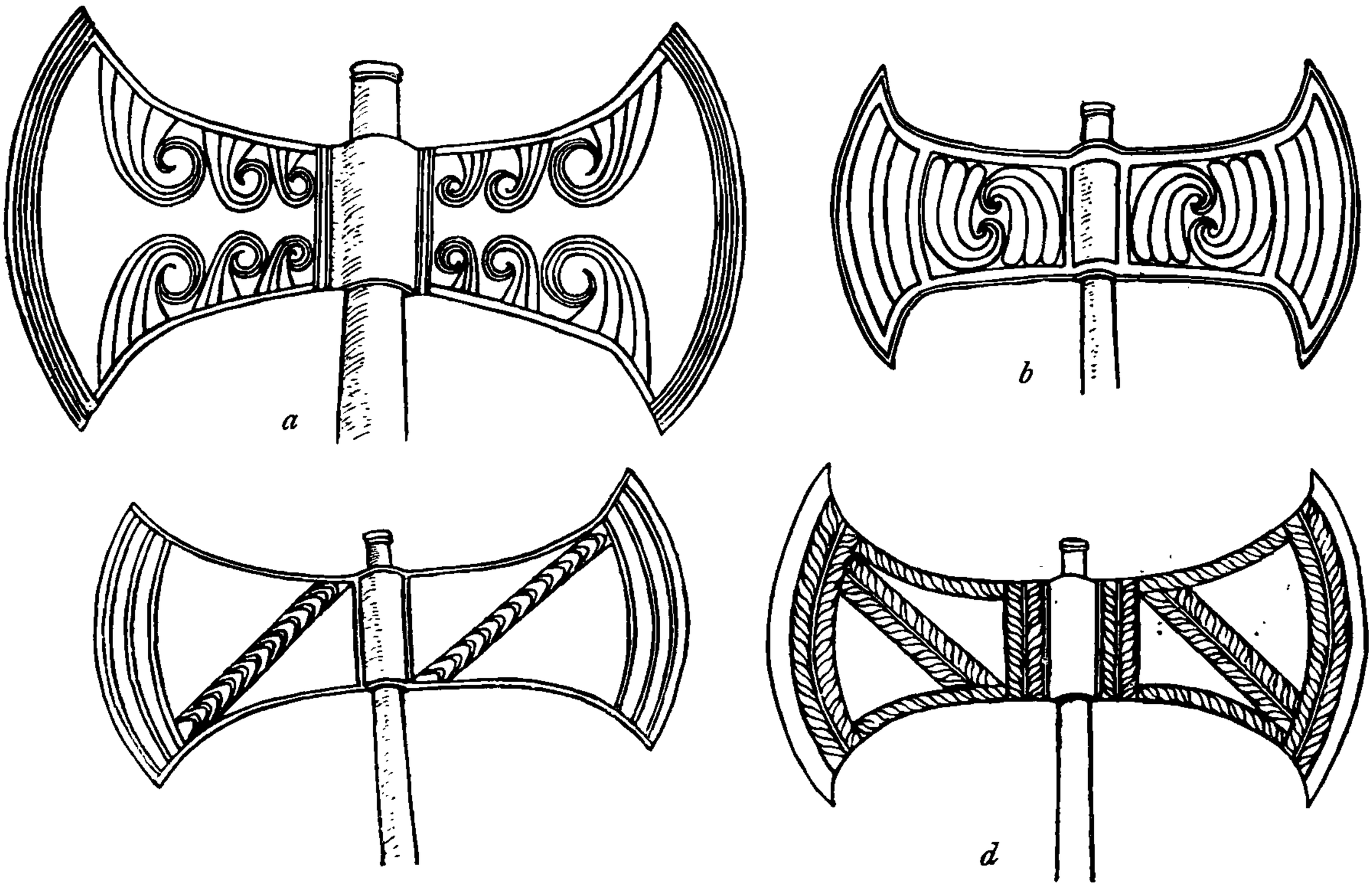
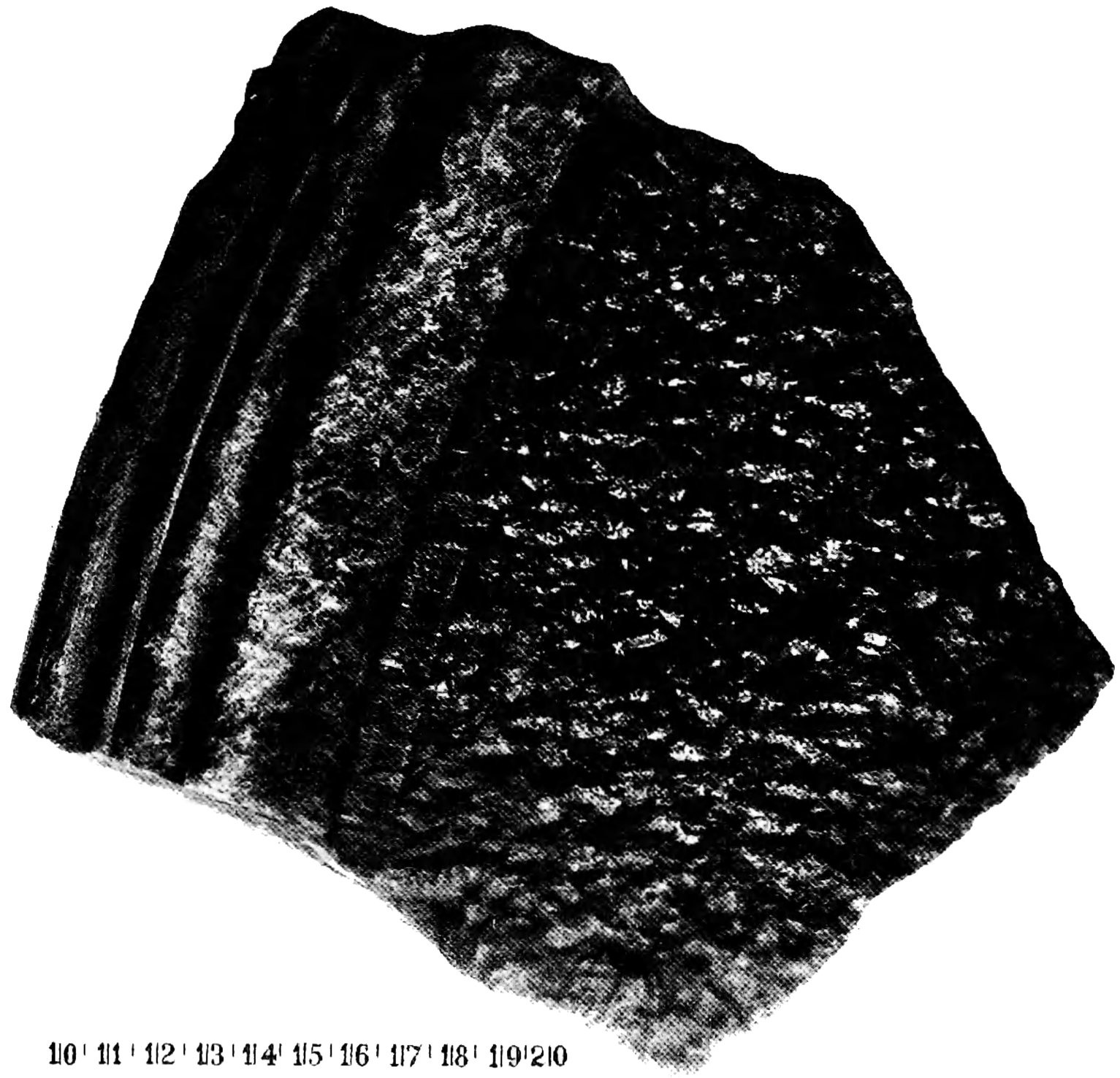


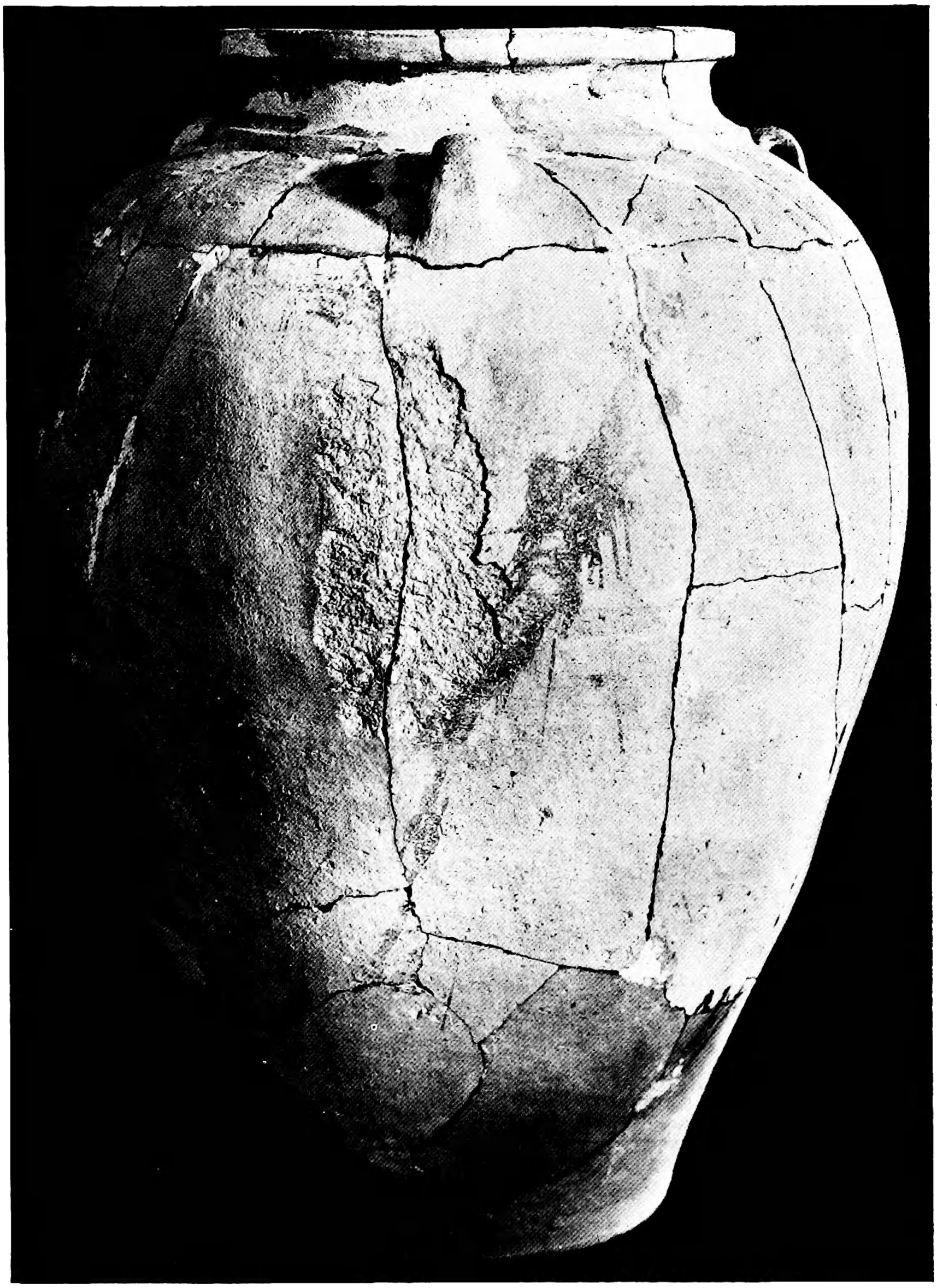
FIG. 315 *bis* (SEE ABOVE PP. 346, 347, FIG. 290). MINIATURE BRONZE DOUBLE AXES FROM VOTIVE DEPOSIT; ARKALO-KHORIO CAVE (S.E. OF KNOSSOS): *a*, ENGRAVED PATTERN, FLAMBOYANT DECORATIVE OF THE 'ADDER MARK' SERIES—PERHAPS PROTOTYPE OF 'GEOMETRICAL' OF FIG. 315. 3; *b*, SCROLLS RESEMBLING RELIEFS IN MEDALLION OF IVORY COMB FROM LATE INTERMENT (L. M. II) OF TEMPLE TOMB, BUT OF M. M. II TRADITION.

SUPPLEMENTARY PLATES

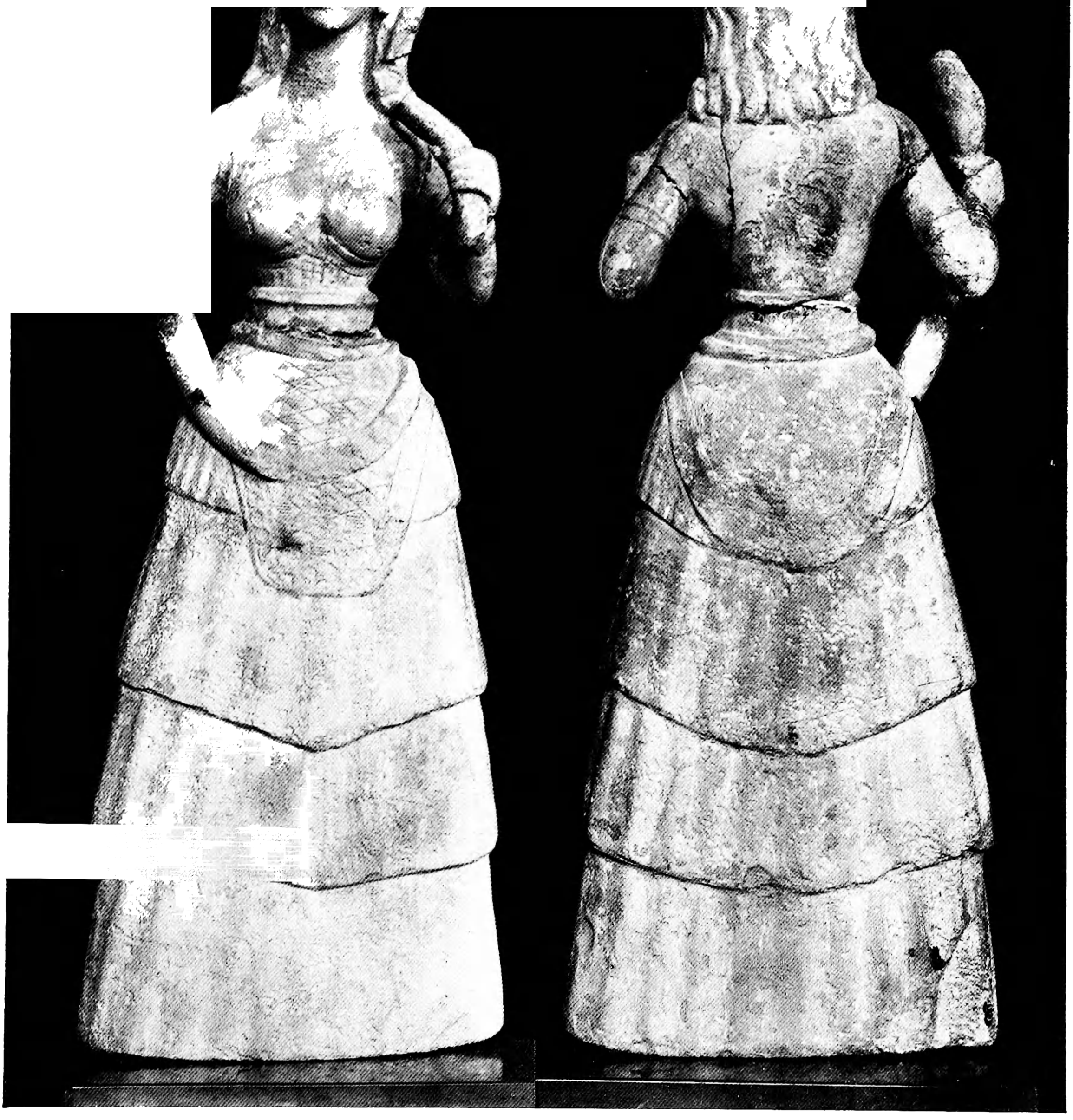
STONE FIGURE OF TIARA'D GODDESS. Height 36 cm. (See p. 37.)



B. Part of M. M. I *a* Circular Stone Table: House B.
(1·06 metres in diameter.) (See pp. 73, 74.)



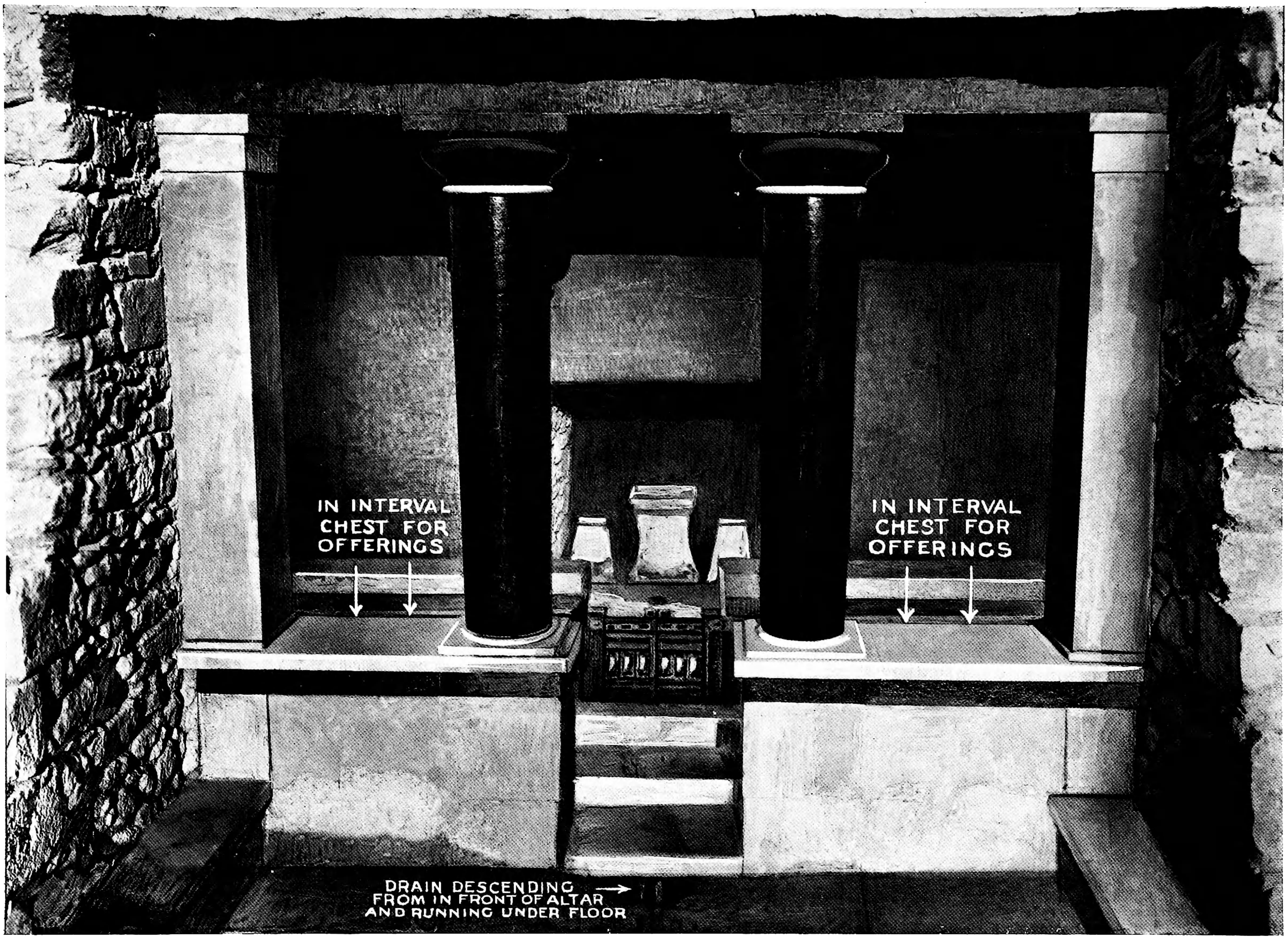
LARGE JAR CONTAINING UTENSILS FOR DOMESTIC SNAKE CULT.
Height 71 cm. (See p. 138.)



A, B. VEINED LIMESTONE STATUETTE OF GODDESS, HOLDING SNAKE. (Height 40 cm.)

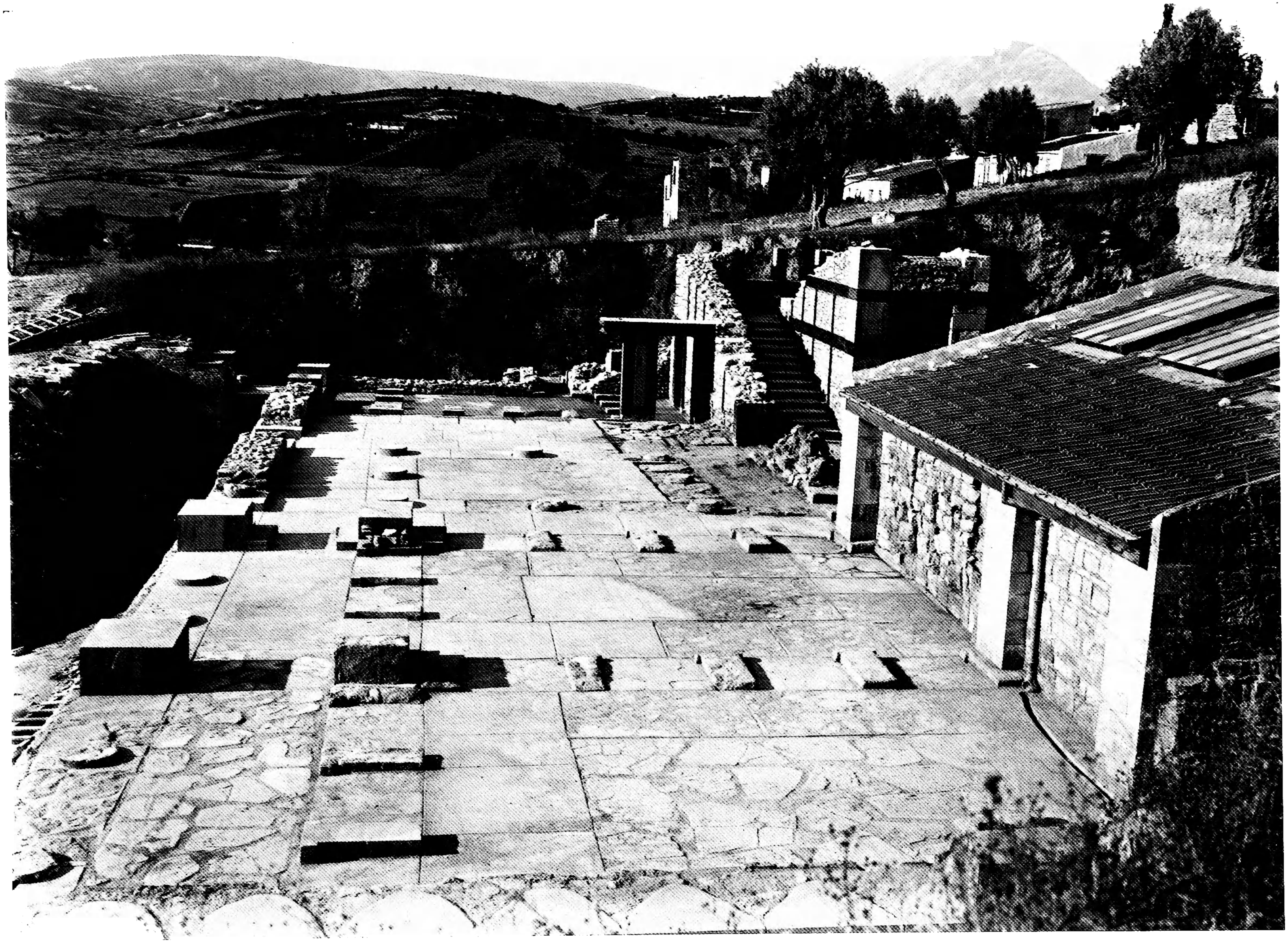
(See p. 194.)

STEPWAY BY 'HIGH PRIEST'S' HOUSE.



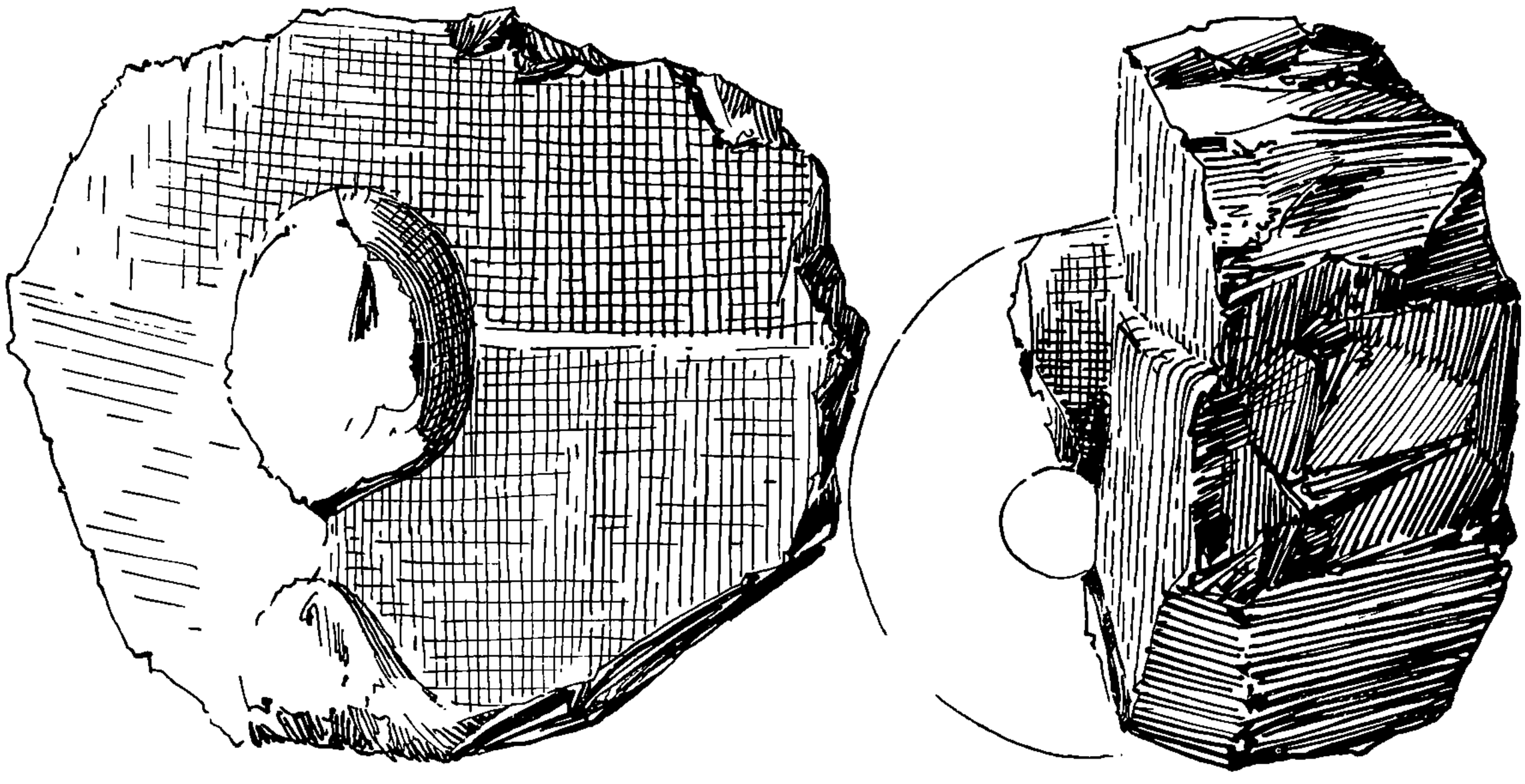
VIEW OF WEST END OF CHAPEL OF HIGH PRIEST'S HOUSE (RESTORED).

(See p. 208.)



View of East Front of 'Little Palace' looking South. (Shows reconstituted Staircase.)

(See p. 216.)



FRAGMENT OF WHITE LIMESTONE JAR SHOWING RAISED BAND AND STUMPS OF HANDLE: PROBABLY CONSTRUCTED IN SECTIONS. CORRIDOR OF MAGAZINES.

(See p. 232.)